		DEPARTMENT	TATE OF UTAH OF NATURAL RES OF OIL, GAS AND I				FOR			
APPLI	CATION FOR	PERMIT TO DRILL	-			1. WELL NAME and	NUMBER NANZA 1023-6E3AS	;		
2. TYPE OF WORK  DRILL NEW WELL (	REENTER P	&A WELL DEEPE	EN WELL			3. FIELD OR WILDCAT NATURAL BUTTES				
4. TYPE OF WELL Gas We	ell Coall	bed Methane Well: NO				5. UNIT or COMMU	NITIZATION AGRE	EMENT NAME		
6. NAME OF OPERATOR KERF	k-MCGEE OIL &		7. OPERATOR PHO	NE 720 929-6007						
8. ADDRESS OF OPERATOR P.O		9. OPERATOR E-MA Kathy.Schne	. <b>IL</b> ebeckDulnoan@ana	darko.com						
10. MINERAL LEASE NUMBER	(FEDERAL, INDIAN, OR STATE)						ERSHIP			
UTU38419  13. NAME OF SURFACE OWNER (if box 12	= 'fee')	FEDERAL IND	PIAN () STATE (	_/ FEE	0	FEDERAL INI	DIAN STATE	FEE		
15. ADDRESS OF SURFACE OWNER (if box						16. SURFACE OWN	•	•		
13. ADDRESS OF SURFACE OWNER (II DOX	12 - 166 )						LK L-MAIL (II DOX	12 - 166 )		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C			_	VERTICAL DIF	RECTIONAL 📵 H	ORIZONTAL 🔲		
20. LOCATION OF WELL	FC	DOTAGES	QTR-QTR	SECT	TION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE	1870 F	SL 1712 FWL	NESW	6		10.0 S	23.0 E	S		
Top of Uppermost Producing Zone	2286 F	FNL 507 FWL	SWNW	6		10.0 S	23.0 E	S		
At Total Depth	2286 F	FNL 507 FWL	SWNW	6		10.0 S	23.0 E	S		
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN	IE (Feet)		23. NUMBER OF ACRES IN DRILLING UNIT 516				
		25. DISTANCE TO N (Applied For Drilling		SAME POO	DL	26. PROPOSED DEF	PTH : 8886 TVD: 8613	3		
27. ELEVATION - GROUND LEVEL 5221		28. BOND NUMBER	WYB000291			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496				
3-11		۸٦	TTACHMENTS							
			TTACHIFIERTS							
VERIFY THE FOLLOWING	ARE ATTACH	HED IN ACCORDAN	CE WITH THE U	TAH OIL	AND G	GAS CONSERVATI	ON GENERAL RI	ULES		
WELL PLAT OR MAP PREPARED BY	LICENSED SUI	RVEYOR OR ENGINEER	R COM							
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRI	EEMENT (IF FEE SURF	ACE) FORI	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DI	RECTIONALLY	OR HORIZONTALLY	г торо	OGRAPHIO	CAL MAI	P				
NAME Gina Becker	1	FITLE Regulatory Analys	st II		PHON	<b>E</b> 720 929-6086				
SIGNATURE		DATE 01/04/2011			EMAIL	gina.becker@anadar	ko.com			
<b>API NUMBER ASSIGNED</b> 43047514640000		APPROVAL			Bol	ogyill				
					Pern	nit Manager				

API Well No: 43047514640000 Received: 1/4/2011

	Propo	osed Hole, Casing, ar	ıd Cement			Proposed Hole, Casing, and Cement										
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)												
Prod	7.875	4.5	0	8886												
Pipe	Grade	Length	Weight													
	Grade I-80 Buttress	0	11.6		П											

API Well No: 43047514640000 Received: 1/4/2011

	Prop	oosed Hole, Casing, a	nd Cement		
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Surf	11	8.625	0	2140	
Pipe	Grade	Length	Weight		
	Grade J-55 LT&C	0	28.0		Г

Bonanza 1023-6K Pad Drilling Program
1 of 4

## Kerr-McGee Oil & Gas Onshore. L.P.

## **BONANZA 1023-6E3AS**

 Surface:
 1870 FSL / 1712 FWL
 NESW
 Lot

 BHL:
 2286 FNL / 507 FWL
 SWNW
 Lot 5

Section 6 T10S R23E

Unitah, Utah Mineral Lease: UTU-38419

### **ONSHORE ORDER NO. 1**

## **DRILLING PROGRAM**

## 1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1260	
Birds Nest	1524	Water
Mahogany	1887	Water
Wasatch	4291	Gas
Mesaverde	6461	Gas
MVU2	7416	Gas
MVL1	8006	Gas
TVD	8613	
MD	8886	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

## 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

## 6. <u>Evaluation Program</u>:

Bonanza 1023-6K Pad Drilling Program
2 of 4

Please refer to the attached Drilling Program

#### 7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8,613' TVD, approximately equals 5,277 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,382 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

## 8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

## Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Bonanza 1023-6K Pad Drilling Program 3 of 4

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

## Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

Bonanza 1023-6K Pad Drilling Program
4 of 4

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

## Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

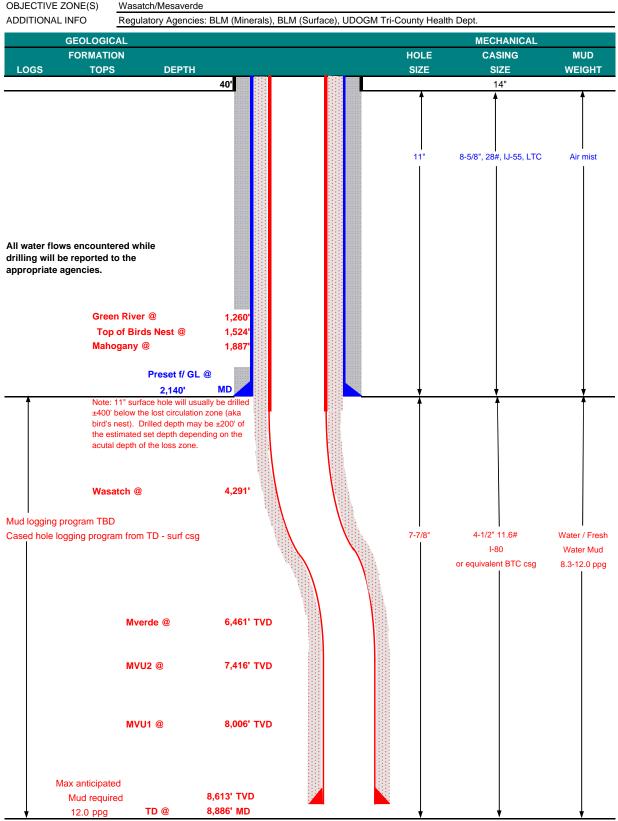
### 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP <u>DRILLING PROGRAM</u>

December 29, 2010 COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP **BONANZA 1023-6E3AS** 8,613' WELL NAME TVD 8,886' MD Natural Buttes COUNTY Uintah FINISHED ELEVATION 5,219' FIELD STATE Utah NESW SURFACE LOCATION 1870 FSL 1712 FWL Sec 6 T 10S R 23E Lot 3 -109.372704 Latitude: 39.975806 Longitude: **NAD 83** BTM HOLE LOCATION SWNW 2286 FNL 507 FWL Sec 6 T 10S R 23E Lot 3 Latitude: 39.978960 -109.377001 NAD 83 Longitude: OBJECTIVE ZONE(S) Wasatch/Mesaverde ADDITIONAL INFO





## **KERR-McGEE OIL & GAS ONSHORE LP**

### **DRILLING PROGRAM**

#### **CASING PROGRAM**

									DESIGN FACTO	ORS
	SIZE	INT	ERVAL	_	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0	-40'							
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,140	28.00	IJ-55	LTC	0.94	1.88	5.75
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	8,886	11.60	I-80	BTC	2.24	1.18	3.09

<sup>\*</sup>Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.51

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 3,382 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 5,277 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	ıtilized	
Option 2 LEAD	1,640'	65/35 Poz + 6% Gel + 10 pps gilsonite	150	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	3,786'	Premium Lite II +0.25 pps	270	10%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,100'	50/50 Poz/G + 10% salt + 2% gel	980	10%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

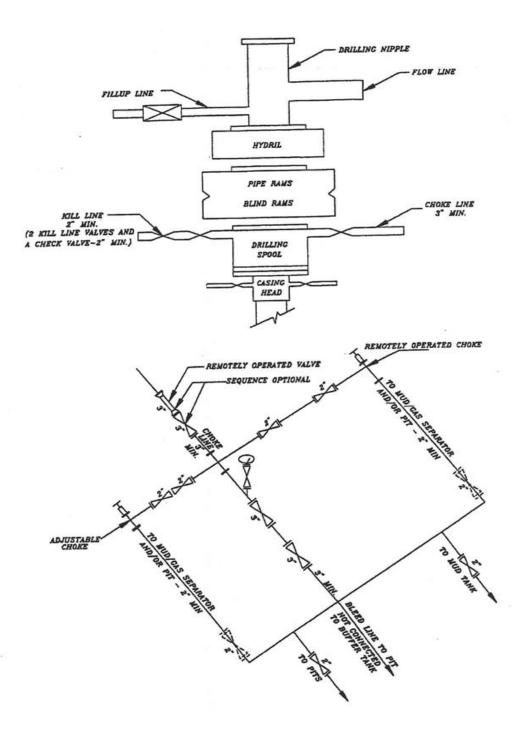
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized

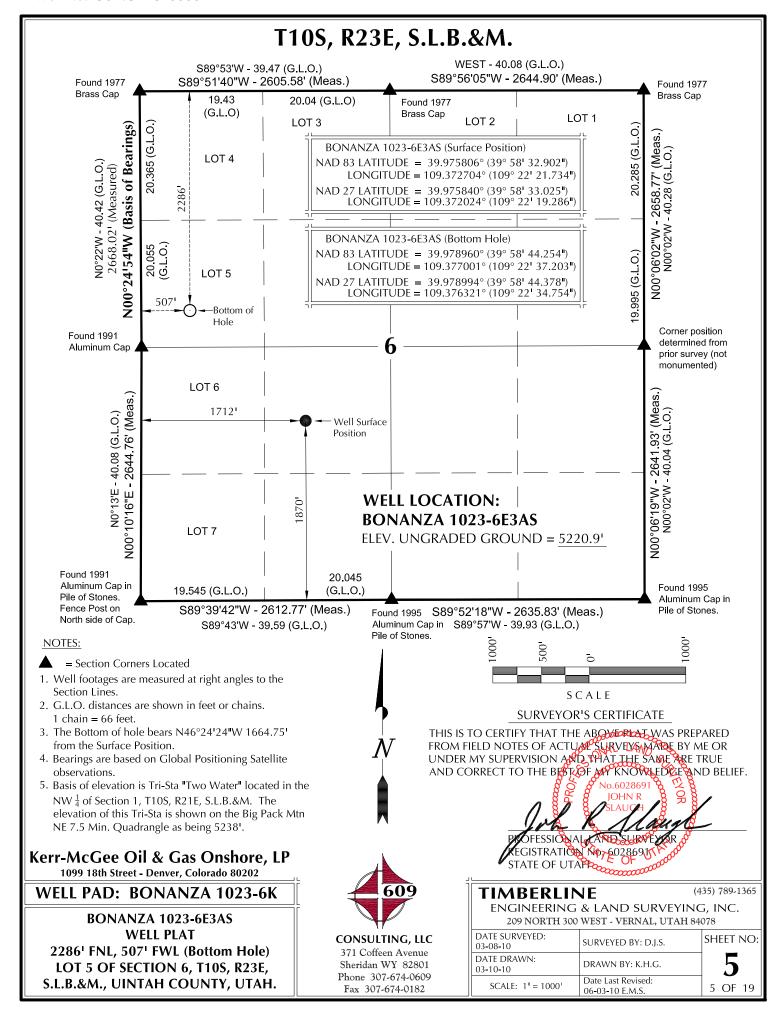
DRILLING ENGINEER:		DATE:	
	Emile Goodwin / Perry Daughtrey		
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young		

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A BONANZA 1023-6E3AS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



	SURFACE POSITION								OTTOM HOLE			
WELL NAME		D83	IDE LITERAL	NAD27	ITUS:	FOCTACE	1 4	NAD		NAE		FOCT : 5-5
BONANZA	<b>LATITUDE</b> 39°58'33.354	LONGITU 109°22'21			19.026"	1915 FSL	39°58'35		LONGITUDE 109°22'15.094"	<b>LATITUDE</b> 39°58'36.015"	LONGITUDE 109°22'12.647"	
1023-6K1CS	39.975932°	109-22-21				1732' FWL	39.9766		109-22-15.094" 109.370859°	39.976671°	109-22-12.64/ 109.370180°	2170 FSL 2228 FWL
BONANZA	39°58'33.264	" 109°22'21	.526" 39°58'33	.387" 109°22	19.078"	1907' FSL	39°58'39	9.729"	109°22'03.411"	39°58'39.852"	109°22'00.964"	2556' FSL
1023-6J2AS BONANZA	39.975907° 39°58'33.173	109.37264 109°22'21			1966° '19.130"	1728' FWL 1897' FSL	39.9777 39°58'40		109.367614° 109°22'25.552"	39.977737° 39°58'40.125"	109.366935° 109°22'23.104"	2100' FEL 2590' FSL
1023-6K2BS	39.975882°	109.37266				1724' FWL	39.9777		109.373764°	39.977813°	109.373084°	1412' FWL
BONANZA	39°58'33.083'	" 109°22'21.	.630" 39°58'33	.207" 109°22	19.183"	1888' FSL	39°58'35		109°22'24.636"	39°58'35.930"	109°22'22.188"	2165' FSL
1023-6K2CS BONANZA	39.975857° 39°58'32.902	109.37267 109°22'21			1995° '19.286"	1720' FWL 1870' FSL	39.9766 39°58'44		109.373510° 109°22'37.203"	39.976647° 39°58'44.378"	109.372830° 109°22'34.754"	1485' FWL 2286' FNL
1023-6E3AS	39.975806°	109-22-21		0° 109.372	2024°	1712' FWL	39.9789		109°22'37'.203 109.377001°	39.978994°	109°22 34./34 109.376321°	507' FWL
BONANZA	39°58'32.813	" 109°22'21	.785" 39°58'32	<b>I</b>	19.337"	1861' FSL	39°58'39	9.960"	109°22'36.738"		109°22'34.289"	2590' FSL
1023-6L2AS BONANZA	39.975781° 39°58'32.723	109.37271 109°22'21			2038° '19.392"	1708' FWL 1852' FSL	39.9777 39°58'34		109.376872° 109°22'36.558"	39.977801° 39°58'35 114"	109.376192° 109°22'34.110"	541' FWL 2087' FSL
1023-6L2DS	39.975757°	109.37273		1.00		1704' FWL	39.9763		109.376822°	39.976421°	109.376142°	557' FWL
BONANZA	39°58'32.993 39.975831°				19.234"	1879' FSL						
6-2	39.9/3031	109.37268				1716' FWL	Dosition	to Dotto	na I Iolo			
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST		NAME	to Botto		WELL NAM	1E NORTH	EAST
BONANZA			BONANZA			PONA				BONANZA		
1023-6K1CS	257.4'	496.51	1023-6J2AS	655.81	1409.	1023-6	K2BS	690.8	3' -310.1'	1023-6K2C		-234.4'
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST		NAME	NORT	H EAST			
BONANZA 1023-6E3AS	1147.9'	-1205.7'	BONANZA 1023-6L2AS	722.21	-1165.	.1 BONA 1023-6		228.3	3' -1146.4'			
N580° N	15 13 13 503 15 15 15 15 15 15 15 15 15 15 15 15 15	To Bottom K	319599 14599 150158	N24°10'39"W Hole)	335.82250°		/	/	<i>,</i> '		59722° 59722° 59722°	
ToB	15 301. >93 2.25 W 13.7 13.7 W 13.7	Az= N78°44'0	=281.26472 7"W - 1168 httom Hole)				181.0/6/2N / / / / / / / / / / / / / / / / / /	V <sub>ZA</sub> 10 10 2 10 2 10 2 10 2 10 2 10 2 10 2	023.6K1C5	N62 N62 165°03'12"E 10 Botton 17 Botton	1554.95' m Hole) 5.05333°	/ N
Kerr-McC 1099 1 WELL P WELLS - BON BONANZ	Gee Oil & 8th Street - Do PAD - BO LL PAD INTI ANZA 1023-6K2BS, A 1023-6E3AS,	& Gas Cenver, Color NANZA ERFERENCE (1CS, BONA), BONANZA	Dnshore, I rado 80202 A 1023-6k E PLAT INZA 1023-6j2. 1023-6k2CS, 1023-6L2AS &	.89' LP	5 CONSU 371 Co		BONAN ONAN NANZA TING H NZA TO 2 2 102	VZA 102 1023 VELL: 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6 023.6	023.6K7CS 23.6K2GS AZ. 6K2CS AZ. 8ONANZA 2AS AZ. 10 EX 10 S AZ. 10 EX 10 EX	A. to Exist. W. to Exist. W. H. = 24.003  INE  G & LAND  A. to Exist. W. H. = 24.003	1.554.95 1.554.95 1.554.95 1.505333° 5.05333° 5.05333° 5.05333° 5.05333° 5.05333° 5.05333° 5.05333° 6.204.00500° 7.005000° 7.005000	35) 789-1365 G, INC.
Kerr-McC 1099 1 WELL P WELLS - BON BONANZ BONANZ	Gee Oil & 8th Street - Do PAD - BO LL PAD INTI ANZA 1023-6K2BS, A 1023-6E3AS,	& Gas Cenver, Color NANZA ERFERENCA, BONANZA BONANZA 1023-612D:	Onshore, I rado 80202 A 1023-6k EE PLAT A 1023-6k2CS, 1023-6L2AS & S	.89' LP	S CONSU 371 Co Sherida	BONAN BONAN CALE	BONAN ONAN ONAN VANZA TING H VZA 10 2 2 102	VZA 102 ZA 102 VELL: 023.6 23.6 23.6 23.6 23.6 23.6 23.6 23.6	023.6K7CS 23.6K2GS AZ. 6K2CS AZ. 8ONANZA 2AS AZ. 10 EX 10 S AZ. 10 EX 10 EX	Az. to Exist. W. H. = 24.003  INE  G & LAND  SURVEYED B  165°03'\7"E  Az. to Exist. W. H.  Az. to Exist. W. H.  Exist. W. H. = 24.003  INE  G & LAND  SURVEYED B	1,554.95 1,554.95 1,554.95 1,505333° 5,05333° 5,05333° 5,05333° 5,05333° 5,05333° 5,05300° 70,00500° 70,00500° 70,00500° 70,00500° 70,00500° 80,00500°	N √ √ √ 0.0,

EXISTING GRADE @ CENTER OF WELL PAD = 5221.2' FINISHED GRADE ELEVATION = 5218.6' CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1 TOTAL WELL PAD AREA = 3.84 ACRES TOTAL DAMAGE AREA = 6.18 ACRES SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## WELL PAD - BONANZA 1023-6K

WELL PAD - LOCATION LAYOUT BONANZA 1023-6K1CS, BONANZA 1023-6J2AS, BONANZA 1023-6K2BS, BONANZA 1023-6K2CS, BONANZA 1023-6E3AS, BONANZA 1023-6L2AS & BONANZA 1023-6L2DS LOCATED IN SECTION 6, T10S, R23E, S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182

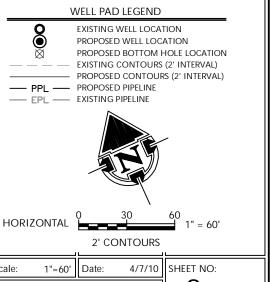
## **WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 20,745 C.Y. TOTAL FILL FOR WELL PAD = 18,389 C.Y. TOPSOIL @ 6" DEPTH = 2,012 C.Y. EXCESS MATERIAL = 2,356 C.Y.

## RESERVE PIT QUANTITIES

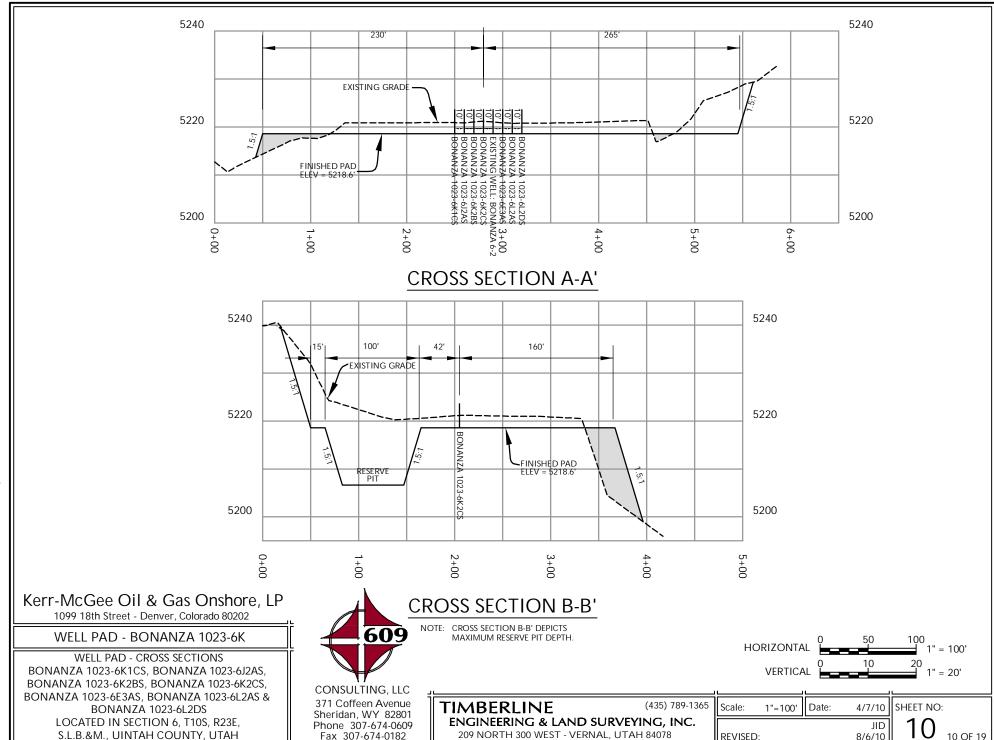
TOTAL CUT FOR RESERVE PIT +/- 6,910 CY RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 26,100 BARRELS

**TIMBERLINE** ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078



JID 8/6/10 REVISED:

9 OF 19



PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED

APIWellNo:43047514640000

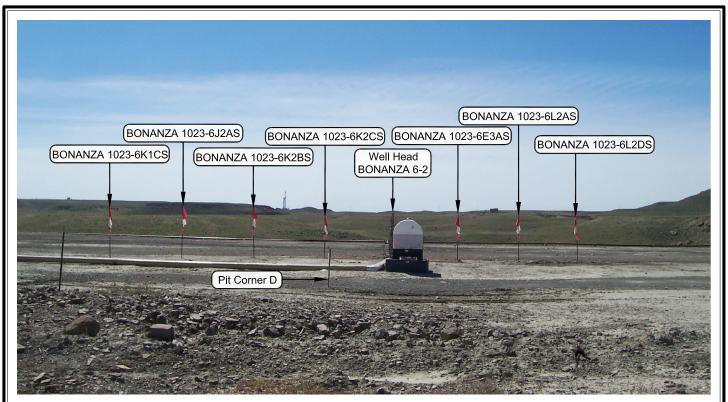


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

**CAMERA ANGLE: SOUTHEASTERLY** 



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

**CAMERA ANGLE: NORTHEASTERLY** 

## Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## **WELL PAD - BONANZA 1023-6K**

LOCATION PHOTOS
BONANZA 1023-6K1CS, BONANZA 1023-6J2AS,
BONANZA 1023-6K2BS, BONANZA 1023-6K2CS,
BONANZA 1023-6E3AS, BONANZA 1023-6L2AS &
BONANZA 1023-6L2DS
LOCATED IN SECTION 6, T10S, R23E,
S.L.B.&M., UINTAH COUNTY, UTAH.



## CONSULTING, LLC

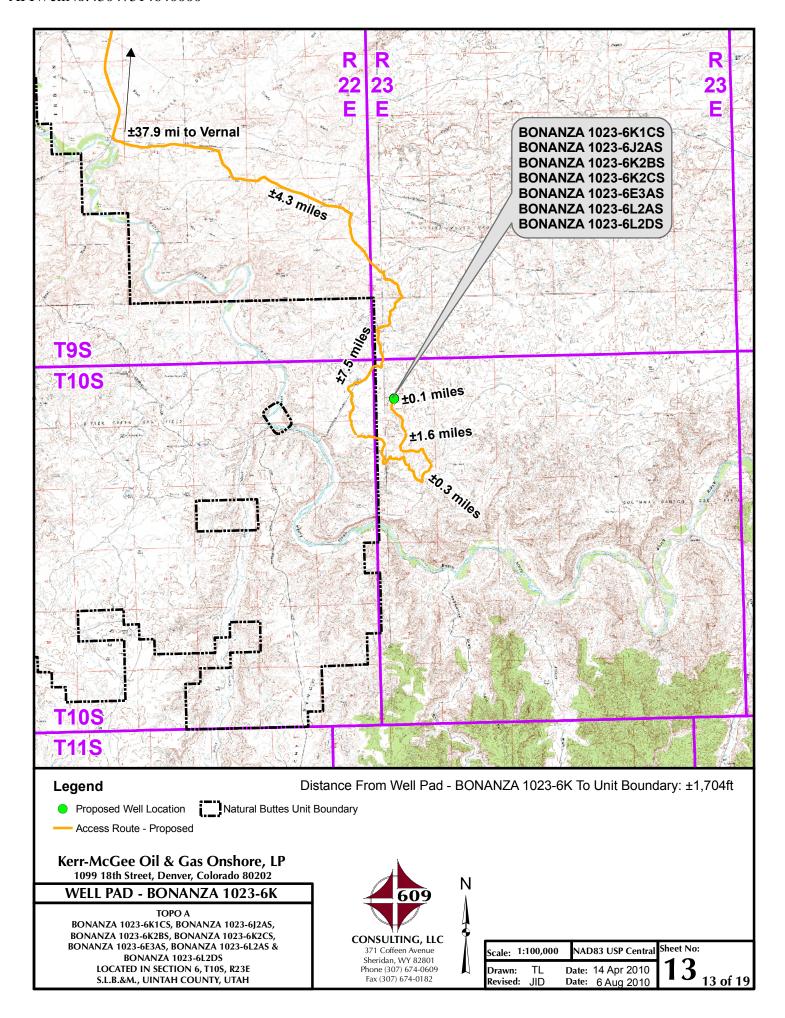
371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

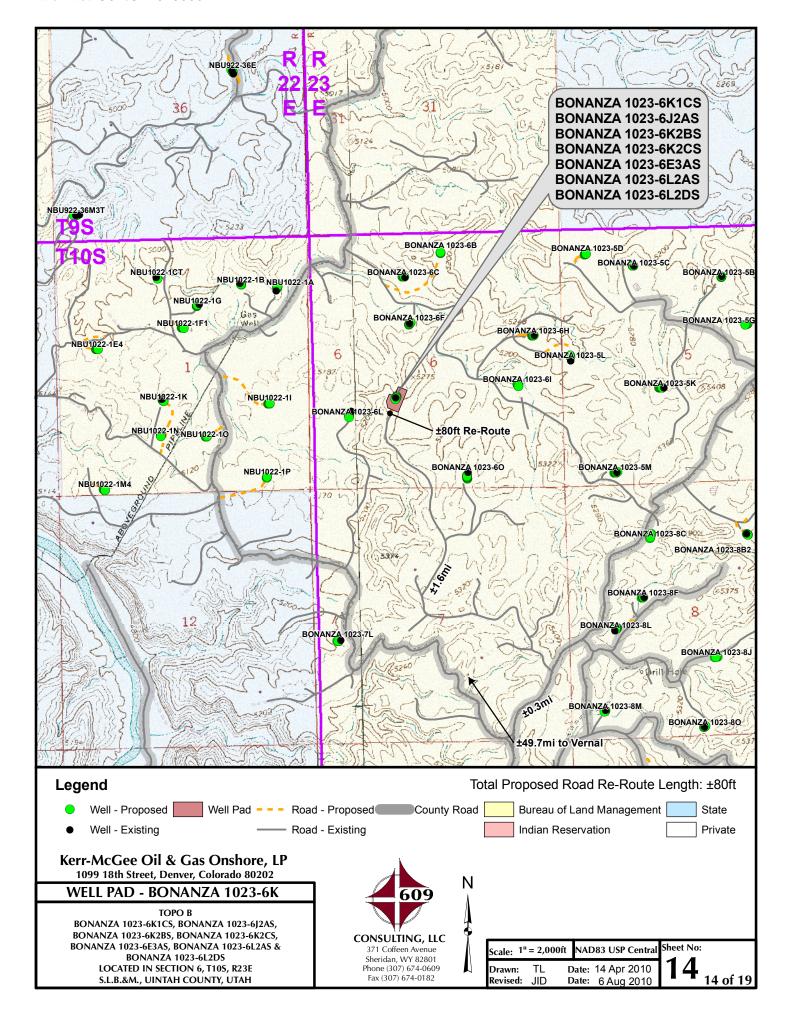
## **TIMBERLINE**

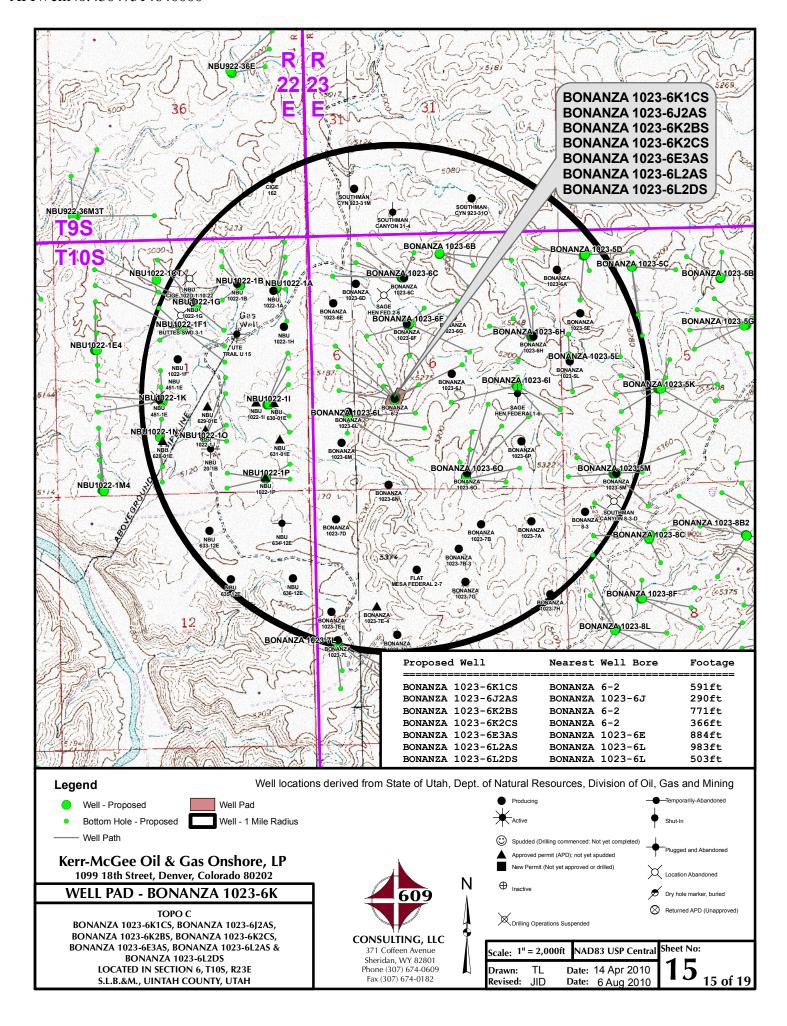
(435) 789-1365

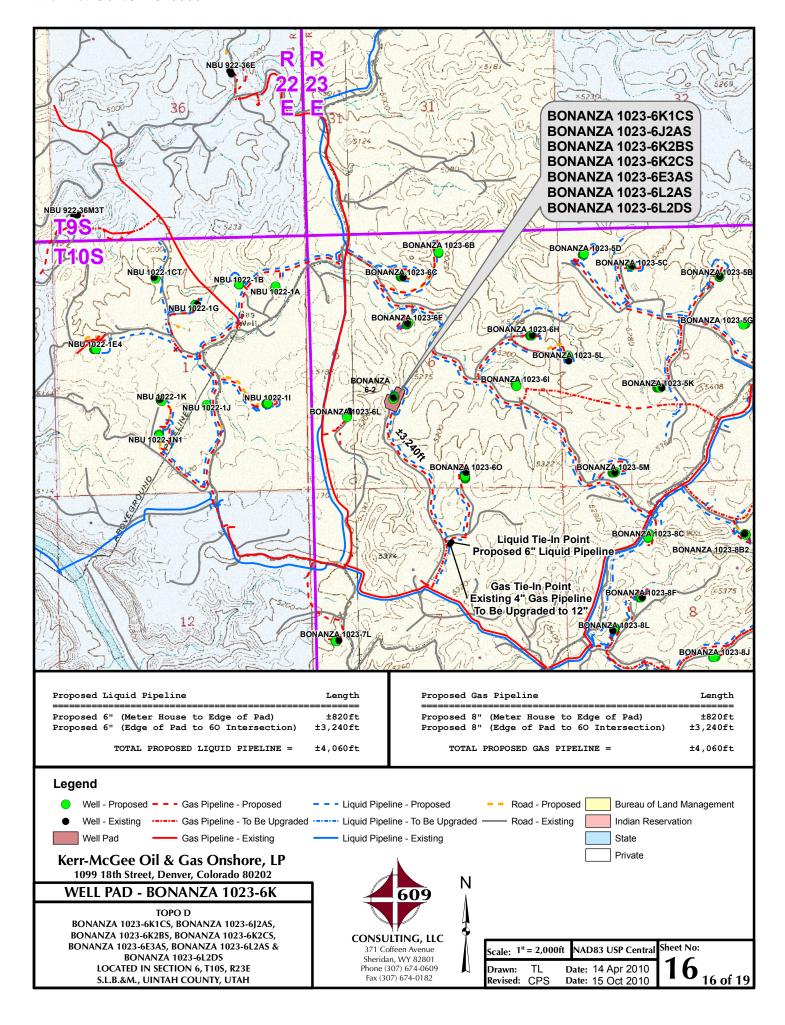
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

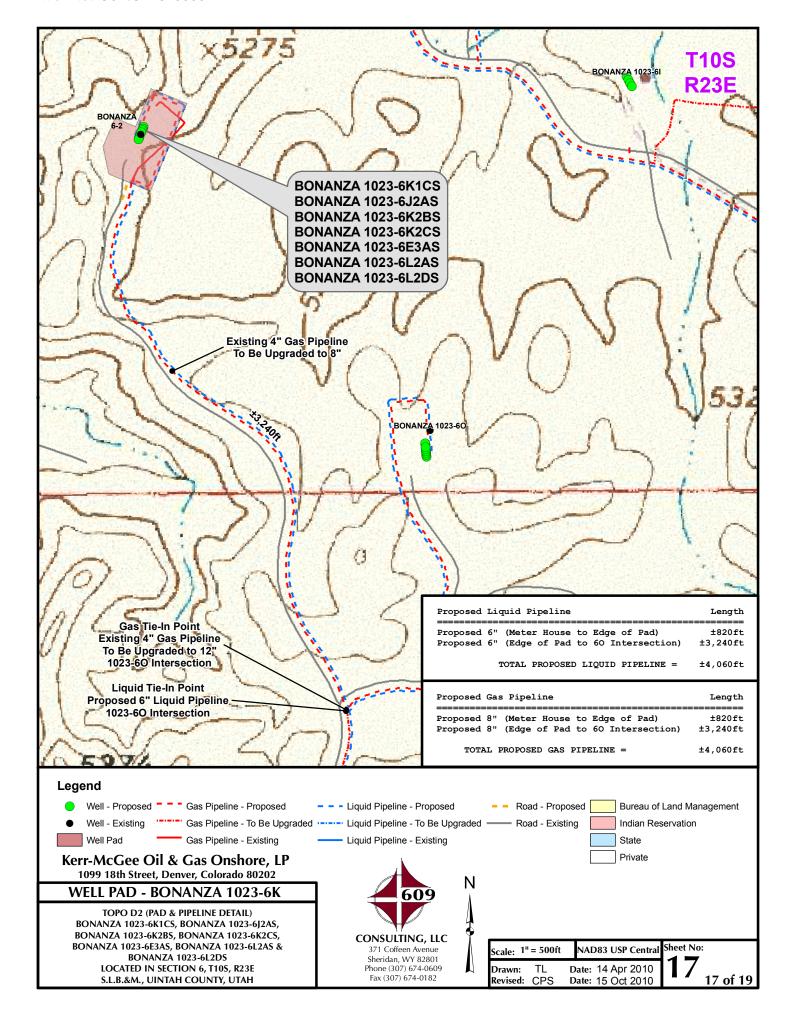
209 NORTH 300	WEST - VERNAL, UTAIL 64	010
DATE PHOTOS TAKEN: 03-08-10	PHOTOS TAKEN BY: D.J.S.	SHEET NO:
DATE DRAWN: 03-10-10	DRAWN BY: K.H.G.	12
Date Last Revised: 06-03-10	D E.M.S.	12 OF 19

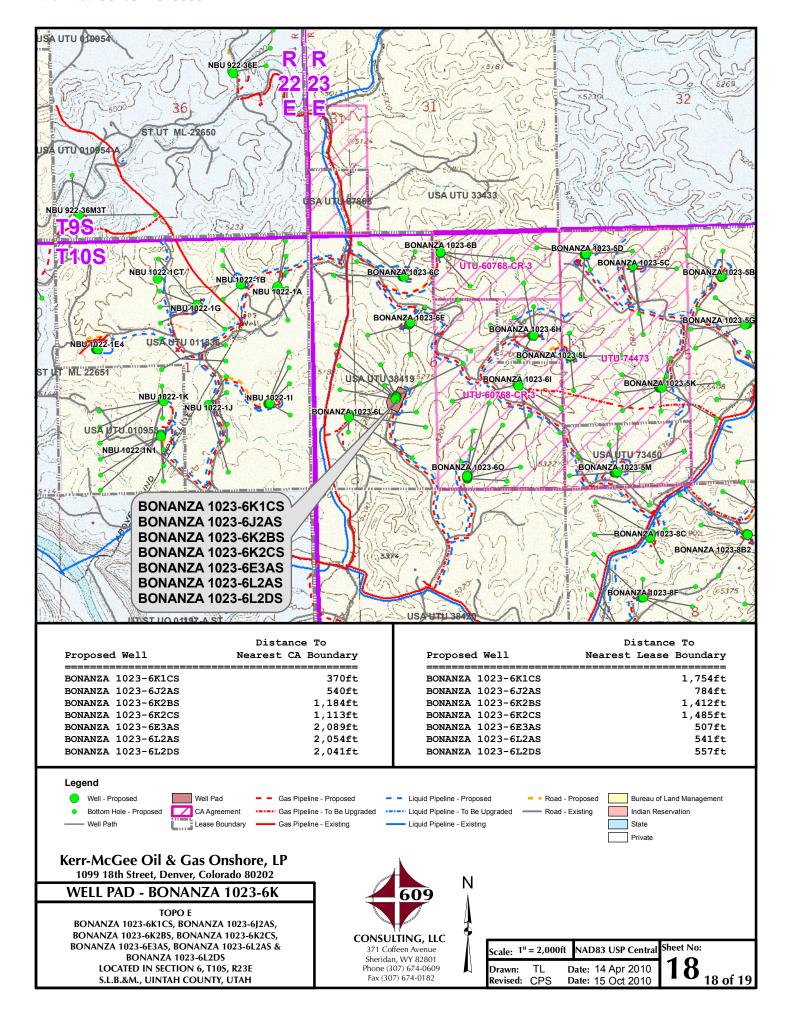












## Kerr-McGee Oil & Gas Onshore, LP WELL PAD – BONANZA 1023-6K WELLS – BONANZA 1023-6K1CS, BONANZA 1023-6J2AS, BONANZA 1023-6K2BS, BONANZA 1023-6K2CS, BONANZA 1023-6E3AS, BONANZA 1023-6L2AS & BONANZA 1023-6L2DS Section 6, T10S, R23E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Chipeta Wells Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge, at the White River. Exit left and proceed in a southeasterly direction along the Chipeta Wells Road approximately 4.3 miles to the intersection of the Atchee Wash Road (County B Road 4240). Exit right and proceed in a southeasterly, then southerly direction along the Atchee Wash Road approximately 7.5 miles to the intersection of the County B Road 3420. Exit left and proceed in a northeasterly direction along the County B Road 3420 approximately 0.3 miles to a service road to the left. Exit left and proceed along said service road approximately 1.6 miles to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 51.6 miles in a southerly direction.



1148.78

PBHL

8250

9000

-750

8613.00

1664

750

1500

Vertical Section at 313.65° (1500 ft/in)

TD at 8885.88

2250

3000

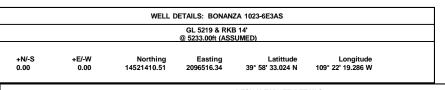
8613.00

- plan hits target center

Project: Uintah County, UT UTM12 Site: Bonanza 1023-6K Pad Well: BONANZA 1023-6E3AS

Wellbore: OH Design: PLAN #1





+E/-W

-1204.07

 DESIGN TARGET DETAILS

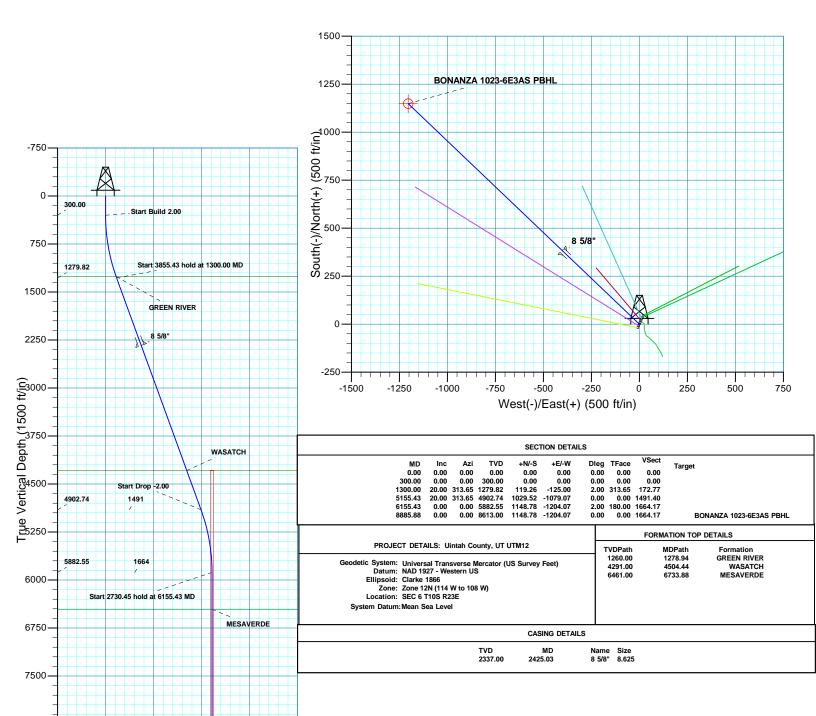
 Northing
 Easting 14522537.11
 Latitude 2095291.51
 Longitude 39° 58° 44.378 N
 Longitude 109° 22° 34.756 W
 Shape Circle (Radius: 25.00)

MAzimuths to True North
Magnetic North: 11.11°

Magnetic Field
Strength: 52405.9snT
Dip Angle: 65.89°
Date: 09/16/2010
Model: IGRF2010

Plan: PLAN #1 (BONANZA 1023-6E3AS/OH)

Created By: RobertScott Date: 17:34, September 16 2010





# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 Bonanza 1023-6K Pad BONANZA 1023-6E3AS

ОН

Plan: PLAN #1

## **Standard Planning Report**

16 September, 2010





## SDI Planning Report



EDM5000-RobertS-Local Database:

Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Bonanza 1023-6K Pad Site: Well: BONANZA 1023-6E3AS

Wellbore: ОН Design: PLAN #1

Site

**Local Co-ordinate Reference:** 

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Well BONANZA 1023-6E3AS

GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED) GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED)

Mean Sea Level

Minimum Curvature

Project Uintah County, UT UTM12

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

Bonanza 1023-6K Pad, SEC 6 T10S R23E

Northing: 14,521,392.52 usft 39° 58' 32.848 N Site Position: Latitude: From: Lat/Long Easting: 2,096,508.54 usft Longitude: 109° 22' 19.391 W

System Datum:

**Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in **Grid Convergence:** 1.05°

Well BONANZA 1023-6E3AS, 1870' FSL 1712' FWL

39° 58' 33.024 N **Well Position** +N/-S 17.85 ft 14,521,410.51 usft Latitude: Northing:

+E/-W 8.13 ft Easting: 2,096,516.34 usft Longitude: 109° 22' 19.286 W

**Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 5.219.00 ft

ОН Wellbore Declination Dip Angle Field Strength Magnetics **Model Name** Sample Date (°) (°) (nT) IGRF2010 09/16/2010 11.11 65.89 52,406

PLAN #1 Design **Audit Notes:** PLAN 0.00 Version: Phase: Tie On Depth: +N/-S Vertical Section: Depth From (TVD) +E/-W Direction

(ft) (ft) (ft) (°) 0.00 0.00 0.00 313.65

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	313.65	1,279.82	119.26	-125.00	2.00	2.00	0.00	313.65	
5,155.43	20.00	313.65	4,902.74	1,029.52	-1,079.07	0.00	0.00	0.00	0.00	
6,155.43	0.00	0.00	5,882.55	1,148.78	-1,204.07	2.00	-2.00	0.00	180.00	
8,885.88	0.00	0.00	8,613.00	1,148.78	-1,204.07	0.00	0.00	0.00	0.00	BONANZA 1023-6E3



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad
Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well BONANZA 1023-6E3AS

GL 5219 & RKB 14' @ 5233.00ft (ASSUMED)

GL 5219 & RKB 14' @ 5233.00ft (ASSUMED)

True

Minimum Curvature

nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00 200.00	0.00 0.00	0.00 0.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build									
400.00	2.00	313.65	399.98	1.20	-1.26	1.75	2.00	2.00	0.00
500.00	4.00	313.65	499.84	4.82	-5.05	6.98	2.00	2.00	0.00
600.00	6.00	313.65	599.45	10.83	-11.35	15.69	2.00	2.00	0.00
700.00	8.00	313.65	698.70	19.25	-20.17	27.88	2.00	2.00	0.00
800.00	10.00	313.65	797.47	30.04	-31.49	43.52	2.00	2.00	0.00
900.00	12.00	313.65	895.62	43.21	-45.29	62.60	2.00	2.00	0.00
1,000.00	14.00	313.65	993.06	58.74	-61.57	85.10	2.00	2.00	0.00
1,100.00	16.00	313.65	1,089.64	76.61	-80.29	110.98	2.00	2.00	0.00
1,200.00	18.00	313.65	1,185.27	96.79	-101.45	140.21	2.00	2.00	0.00
1,278.94	19.58	313.65	1,260.00	114.34	-119.84	165.64	2.00	2.00	0.00
GREEN RIV		040.05	4 070 00	440.00	405.00	470 77	0.00	0.00	0.00
1,300.00	20.00	313.65	1,279.82	119.26	-125.00	172.77	2.00	2.00	0.00
Start 3855.4	13 hold at 1300.00	МО							
1,400.00	20.00	313.65	1,373.78	142.87	-149.75	206.97	0.00	0.00	0.00
1,500.00	20.00	313.65	1,467.75	166.48	-174.49	241.17	0.00	0.00	0.00
1,600.00	20.00	313.65	1,561.72	190.09	-199.24	275.37	0.00	0.00	0.00
1,700.00	20.00	313.65	1,655.69	213.70	-223.99	309.58	0.00	0.00	0.00
1,800.00	20.00	313.65	1,749.66	237.31	-248.73	343.78	0.00	0.00	0.00
1,900.00	20.00	313.65	1,843.63	260.92	-273.48	377.98	0.00	0.00	0.00
2,000.00	20.00	313.65	1,937.60	284.53	-298.22	412.18	0.00	0.00	0.00
2,100.00	20.00	313.65	2,031.57	308.14	-322.97	446.38	0.00	0.00	0.00
2,200.00 2,300.00	20.00 20.00	313.65 313.65	2,125.54 2,219.51	331.75 355.36	-347.72 -372.46	480.59 514.79	0.00 0.00	0.00 0.00	0.00 0.00
2,400.00	20.00	313.65	2,313.48	378.97	-397.21	548.99	0.00	0.00	0.00
2,425.03	20.00	313.65	2,337.00	384.88	-403.40	557.55	0.00	0.00	0.00
<b>8 5/8"</b> 2,500.00	20.00	313.65	2,407.45	402.58	-421.95	583.19	0.00	0.00	0.00
2,600.00	20.00	313.65	2,501.42	426.19	-421.93 -446.70	617.39	0.00	0.00	0.00
2,700.00	20.00	313.65	2,595.39	449.80	-471.44	651.60	0.00	0.00	0.00
2,800.00	20.00	313.65	2,689.35	473.41	-496.19	685.80	0.00	0.00	0.00
2,900.00	20.00	313.65	2,009.33	473.41	-496.19 -520.94	720.00	0.00	0.00	0.00
3,000.00	20.00	313.65	2,877.29	520.63	-545.68	754.20	0.00	0.00	0.00
3,100.00	20.00	313.65	2,971.26	544.24	-570.43	788.40	0.00	0.00	0.00
3,200.00	20.00	313.65	3,065.23	567.85	-595.17	822.61	0.00	0.00	0.00
3,300.00	20.00	313.65	3,159.20	591.45	-619.92	856.81	0.00	0.00	0.00
3,400.00	20.00	313.65	3,253.17	615.06	-644.67	891.01	0.00	0.00	0.00
3,500.00	20.00	313.65	3,347.14	638.67	-669.41	925.21	0.00	0.00	0.00
3,600.00	20.00	313.65	3,441.11	662.28	-694.16	959.41	0.00	0.00	0.00
3,700.00	20.00	313.65	3,535.08	685.89	-718.90	993.62	0.00	0.00	0.00
3,800.00	20.00	313.65	3,629.05	709.50	-743.65	1,027.82	0.00	0.00	0.00
3,900.00	20.00	313.65	3,723.02	733.11	-768.40	1,062.02	0.00	0.00	0.00
4,000.00	20.00	313.65	3,816.99	756.72	-793.14	1,096.22	0.00	0.00	0.00
4,100.00	20.00	313.65	3,910.95	780.33	-817.89	1,130.42	0.00	0.00	0.00
4,200.00	20.00	313.65	4,004.92	803.94	-842.63	1,164.63	0.00	0.00	0.00
4,300.00	20.00	313.65	4,098.89	827.55	-867.38	1,198.83	0.00	0.00	0.00
4,400.00	20.00	313.65	4,192.86	851.16	-892.13	1,233.03	0.00	0.00	0.00
4,500.00	20.00	313.65	4,286.83	874.77	-916.87	1,267.23	0.00	0.00	0.00



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad
Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method:

ce: Well BONANZA 1023-6E3AS

GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED) GL 5219 & RKB 14' @ 5233.00ft (ASSUMED)

True

Minimum Curvature

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,504.44	20.00	313.65	4,291.00	875.82	-917.97	1,268.75	0.00	0.00	0.00
WASATCH	20.00	313.03	4,231.00	073.02	-517.57	1,200.73	0.00	0.00	0.00
4,600.00	20.00	313.65	4,380.80	898.38	-941.62	1,301.43	0.00	0.00	0.00
4,700.00	20.00	313.65	4,474.77	921.99	-966.36	1,335.64	0.00	0.00	0.00
4,800.00	20.00	313.65	4,568.74	945.60	-991.11	1,369.84	0.00	0.00	0.00
4,900.00	20.00	313.65	4,662.71	969.21	-1,015.86	1,404.04 1,438.24	0.00 0.00	0.00	0.00 0.00
5,000.00 5,100.00	20.00 20.00	313.65 313.65	4,756.68 4,850.65	992.82 1,016.43	-1,040.60 -1,065.35	1,430.24	0.00	0.00 0.00	0.00
5,155.43	20.00	313.65	4,902.74	1,029.52	-1,079.07	1,491.40	0.00	0.00	0.00
Start Drop -		313.03	4,302.74	1,029.32	-1,073.07	1,431.40	0.00	0.00	0.00
5,200.00	19.11	313.65	4,944.73	1,039.81	-1,089.86	1,506.32	2.00	-2.00	0.00
5,300.00	17.11	313.65	5,039.78	1,061.27	-1,112.34	1,537.40	2.00	-2.00	0.00
5,400.00	15.11	313.65	5,135.84	1,080.42	-1,132.42	1,565.15	2.00	-2.00	0.00
5,500.00	13.11	313.65	5,232.82	1,097.25	-1,150.05	1,589.52	2.00	-2.00	0.00
5,600.00	11.11	313.65	5,330.59	1,111.73	-1,165.23	1,610.50	2.00	-2.00	0.00
5,700.00	9.11	313.65	5,429.04	1,123.84	-1,177.93	1,628.05	2.00	-2.00	0.00
5,800.00	7.11	313.65	5,528.03	1,133.58	-1,188.13	1,642.15	2.00	-2.00	0.00
5,900.00	5.11	313.65	5,627.46	1,140.92	-1,195.83	1,652.79	2.00	-2.00	0.00
6,000.00	3.11	313.65	5,727.20	1,145.87	-1,201.02	1,659.96	2.00	-2.00	0.00
6,100.00	1.11	313.65	5,827.12	1,148.41	-1,203.68	1,663.64	2.00	-2.00	0.00
6,155.43	0.00 5 hold at 6155.43	0.00	5,882.55	1,148.78	-1,204.07	1,664.17	2.00	-2.00	0.00
6,200.00	0.00	0.00	5,927.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,300.00	0.00	0.00	6,027.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,400.00	0.00	0.00	6,127.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,500.00	0.00	0.00	6,227.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,600.00	0.00	0.00	6,327.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,700.00	0.00	0.00	6,427.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
6,733.88	0.00	0.00	6,461.00	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
MESAVERD		0.00	6 507 10	1 1/0 70	1 204 07	1 664 17	0.00	0.00	0.00
6,800.00	0.00	0.00	6,527.12	1,148.78	-1,204.07	1,664.17			
6,900.00	0.00	0.00	6,627.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,000.00 7,100.00	0.00 0.00	0.00 0.00	6,727.12 6,827.12	1,148.78 1,148.78	-1,204.07 -1,204.07	1,664.17 1,664.17	0.00 0.00	0.00 0.00	0.00 0.00
7,100.00	0.00	0.00	6,927.12	1,148.78	-1,204.07 -1,204.07	1,664.17	0.00	0.00	0.00
7,300.00	0.00	0.00	7,027.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,400.00	0.00	0.00	7,127.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,500.00	0.00	0.00	7,127.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,600.00	0.00	0.00	7,327.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,700.00	0.00	0.00	7,427.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,800.00	0.00	0.00	7,527.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
7,900.00	0.00	0.00	7,627.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,000.00	0.00	0.00	7,727.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,100.00	0.00	0.00	7,827.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,200.00	0.00	0.00	7,927.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,300.00	0.00	0.00	8,027.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,400.00	0.00	0.00	8,127.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,500.00	0.00	0.00	8,227.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,600.00	0.00	0.00	8,327.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,700.00	0.00	0.00	8,427.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00
8,800.00	0.00	0.00	8,527.12	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00



# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 Bonanza 1023-6K Pad BONANZA 1023-6E3AS

ОН

Plan: PLAN #1

## **Survey Report - Geographic**

16 September, 2010







Kerr McGee Oil and Gas Onshore LP Company:

Uintah County, UT UTM12 Project:

Site: Bonanza 1023-6K Pad

BONANZA 1023-6E3AS Well:

Wellbore: ОН PLAN #1 Design:

Geo Datum:

Map Zone:

**Local Co-ordinate Reference:** 

**TVD Reference:** MD Reference:

GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED) GL 5219 & RKB 14'

Well BONANZA 1023-6E3AS

@ 5233.00ft (ASSUMED)

True North Reference:

Minimum Curvature **Survey Calculation Method:** Database: EDM5000-RobertS-Local

Uintah County, UT UTM12 **Project** 

Map System: Universal Transverse Mercator (US Survey Feet)

System Datum: NAD 1927 - Western US

Zone 12N (114 W to 108 W)

Mean Sea Level

Site Bonanza 1023-6K Pad, SEC 6 T10S R23E

Northing: 14,521,392.52 usft 39° 58' 32.848 N Site Position: Latitude: Easting: Longitude: From: Lat/Long 2,096,508.54 usft 109° 22' 19.391 W Grid Convergence: **Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in 1.05

Well BONANZA 1023-6E3AS, 1870' FSL 1712' FWL **Well Position** +N/-S 0.00 ft Northing: 14,521,410.51 usft Latitude: 39° 58' 33.024 N +E/-W 0.00 ft Easting: 2,096,516.34 usft Longitude: 109° 22' 19.286 W **Position Uncertainty** 0.00 ft Wellhead Elevation: Ground Level: 5,219.00 ft

ОН Wellbore Declination Field Strength Magnetics **Model Name** Sample Date Dip Angle (°) (°) (nT) IGRF2010 09/16/2010 11.11 65.89 52,406

Design PLAN #1 Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 313.65

09/16/2010 **Survey Tool Program** Date From То (ft) (ft) Survey (Wellbore) **Tool Name** Description 0.00 8,885.88 PLAN #1 (OH) MWD SDI MWD - Standard ver 1.0.1

Planned Survey	•								
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,521,410.51	2,096,516.34	39° 58' 33.024 N	109° 22' 19.286 W
100.00	0.00	0.00	100.00	0.00	0.00	14,521,410.51	2,096,516.34	39° 58' 33.024 N	109° 22' 19.286 W
200.00	0.00	0.00	200.00	0.00	0.00	14,521,410.51	2,096,516.34	39° 58' 33.024 N	109° 22' 19.286 W
300.00	0.00	0.00	300.00	0.00	0.00	14,521,410.51	2,096,516.34	39° 58′ 33.024 N	109° 22' 19.286 W
Start Bu	ild 2.00								
400.00	2.00	313.65	399.98	1.20	-1.26	14,521,411.70	2,096,515.06	39° 58' 33.036 N	109° 22' 19.303 W
500.00	4.00	313.65	499.84	4.82	-5.05	14,521,415.24	2,096,511.21	39° 58′ 33.072 N	109° 22' 19.351 W
600.00	6.00	313.65	599.45	10.83	-11.35	14,521,421.14	2,096,504.79	39° 58' 33.131 N	109° 22' 19.432 W
700.00	8.00	313.65	698.70	19.25	-20.17	14,521,429.39	2,096,495.82	39° 58′ 33.214 N	109° 22' 19.546 W
800.00	10.00	313.65	797.47	30.04	-31.49	14,521,439.98	2,096,484.31	39° 58' 33.321 N	109° 22' 19.691 W





Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad

Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

GL 5219 & RKB 14' @ 5233.00ft (ASSUMED) GL 5219 & RKB 14'

Well BONANZA 1023-6E3AS

@ 5233.00ft (ASSUMED)

North Reference: True

Survey Calculation Method: Minimum Curvature

Database: EDM5000-RobertS-Local

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
900.00	12.00	313.65	895.62	43.21	-45.29	14,521,452.89	2,096,470.27	39° 58' 33.451 N	109° 22' 19.86
1,000.00	14.00	313.65	993.06	58.74	-61.57	14,521,468.12	2,096,453.71	39° 58' 33.605 N	109° 22' 20.07
1,100.00	16.00	313.65	1,089.64	76.61	-80.29	14,521,485.64	2,096,434.66	39° 58' 33.781 N	109° 22' 20.31
1,200.00	18.00	313.65	1,185.27	96.79	-101.45	14,521,505.44	2,096,413.14	39° 58' 33.981 N	109° 22' 20.59
1,278.94	19.58	313.65	1,260.00	114.34	-119.84	14,521,522.65	2,096,394.43	39° 58' 34.154 N	109° 22' 20.82
GREEN I	RIVER								
1,300.00	20.00	313.65	1,279.82	119.26	-125.00	14,521,527.47	2,096,389.18	39° 58' 34.203 N	109° 22' 20.89
	5.43 hold at 1		•				, ,		
1,400.00	20.00	313.65	1,373.78	142.87	-149.75	14,521,550.63	2,096,364.01	39° 58' 34.436 N	109° 22' 21.21
1,500.00	20.00	313.65	1,467.75	166.48	-174.49	14,521,573.78	2,096,338.84	39° 58' 34.670 N	109° 22' 21.52
1,600.00	20.00	313.65	1,561.72	190.09	-199.24	14,521,596.94	2,096,313.67	39° 58' 34.903 N	109° 22' 21.84
1,700.00	20.00	313.65	1,655.69	213.70	-223.99	14,521,620.09	2,096,288.49	39° 58' 35.136 N	109° 22' 22.16
1,800.00	20.00	313.65	1,749.66	237.31	-248.73	14,521,643.24	2,096,263.32	39° 58' 35.370 N	109° 22' 22.48
1,900.00	20.00	313.65	1,843.63	260.92	-273.48	14,521,666.40	2,096,238.15	39° 58' 35.603 N	109° 22' 22.80
2,000.00	20.00	313.65	1,937.60	284.53	-298.22	14,521,689.55	2,096,212.97	39° 58' 35.836 N	109° 22' 23.11
2,100.00	20.00	313.65	2,031.57	308.14	-322.97	14,521,712.71	2,096,187.80	39° 58′ 36.070 N	109° 22' 23.43
2,200.00	20.00	313.65	2,125.54	331.75	-347.72	14,521,735.86	2,096,162.63	39° 58′ 36.303 N	109° 22' 23.75
2,300.00	20.00	313.65	2,219.51	355.36	-372.46	14,521,759.01	2,096,137.46	39° 58′ 36.536 N	109° 22' 24.07
2,400.00	20.00	313.65	2,313.48	378.97	-397.21	14,521,782.17	2,096,112.28	39° 58′ 36.770 N	109° 22' 24.38
2,425.03	20.00	313.65	2,337.00	384.88	-403.40	14,521,787.96	2,096,105.98	39° 58' 36.828 N	109° 22' 24.46
8 5/8"									
2,500.00	20.00	313.65	2,407.45	402.58	-421.95	14,521,805.32	2,096,087.11	39° 58' 37.003 N	109° 22' 24.70
2,600.00	20.00	313.65	2,501.42	426.19	-446.70	14,521,828.47	2,096,061.94	39° 58' 37.236 N	109° 22' 25.02
2,700.00	20.00	313.65	2,595.39	449.80	-471.44	14,521,851.63	2,096,036.76	39° 58' 37.470 N	109° 22' 25.34
2,800.00	20.00	313.65	2,689.35	473.41	-496.19	14,521,874.78	2,096,011.59	39° 58' 37.703 N	109° 22' 25.66
2,900.00	20.00	313.65	2,783.32	497.02	-520.94	14,521,897.94	2,095,986.42	39° 58' 37.937 N	109° 22' 25.97
3,000.00	20.00	313.65	2,877.29	520.63	-545.68	14,521,921.09	2,095,961.25	39° 58' 38.170 N	109° 22' 26.29
3,100.00	20.00	313.65	2,971.26	544.24	-570.43	14,521,944.24	2,095,936.07	39° 58' 38.403 N	109° 22' 26.61
3,200.00	20.00	313.65	3,065.23	567.85	-595.17	14,521,967.40	2,095,910.90	39° 58' 38.637 N	109° 22' 26.93
3,300.00	20.00	313.65	3,159.20	591.45	-619.92	14,521,990.55	2,095,885.73	39° 58' 38.870 N	109° 22' 27.25
3,400.00	20.00	313.65	3,253.17	615.06 638.67	-644.67 -669.41	14,522,013.71	2,095,860.55	39° 58' 39.103 N	109° 22' 27.56 109° 22' 27.88
3,500.00 3,600.00	20.00 20.00	313.65 313.65	3,347.14 3,441.11	662.28	-694.16	14,522,036.86 14,522,060.01	2,095,835.38 2,095,810.21	39° 58' 39.337 N 39° 58' 39.570 N	109 22 27.86 109° 22' 28.20
3,700.00	20.00	313.65	3,535.08	685.89	-718.90	14,522,083.17	2,095,785.04	39° 58' 39.803 N	109 22 28.20 109° 22' 28.52
3,800.00	20.00	313.65	3,629.05	709.50	-743.65	14,522,106.32	2,095,759.86	39° 58' 40.037 N	109° 22' 28.84
3,900.00	20.00	313.65	3,723.02	733.11	-743.03 -768.40	14,522,100.32	2,095,734.69	39° 58' 40.270 N	109° 22' 29.15
4,000.00	20.00	313.65	3,816.99	756.72	-793.14	14,522,152.63	2,095,709.52	39° 58' 40.503 N	109° 22' 29.47
4,100.00	20.00	313.65	3,910.95	780.33	-817.89	14,522,175.78	2,095,684.34	39° 58' 40.737 N	109° 22' 29.79
4,200.00	20.00	313.65	4,004.92	803.94	-842.63	14,522,198.94	2,095,659.17	39° 58' 40.970 N	109° 22' 30.11
4,300.00	20.00	313.65	4,098.89	827.55	-867.38	14,522,222.09	2,095,634.00	39° 58' 41.203 N	109° 22' 30.43
4,400.00	20.00	313.65	4,192.86	851.16	-892.13	14,522,245.24	2,095,608.83	39° 58' 41.437 N	109° 22' 30.74
4,500.00	20.00	313.65	4,286.83	874.77	-916.87	14,522,268.40	2,095,583.65	39° 58' 41.670 N	109° 22' 31.06
4,504.44	20.00	313.65	4,291.00	875.82	-917.97	14,522,269.43	2,095,582.54	39° 58' 41.681 N	109° 22' 31.08
WASATO	Н								
4,600.00	20.00	313.65	4,380.80	898.38	-941.62	14,522,291.55	2,095,558.48	39° 58' 41.904 N	109° 22' 31.38
4,700.00	20.00	313.65	4,474.77	921.99	-966.36	14,522,314.71	2,095,533.31	39° 58' 42.137 N	109° 22' 31.70
4,800.00	20.00	313.65	4,568.74	945.60	-991.11	14,522,337.86	2,095,508.13	39° 58' 42.370 N	109° 22' 32.02
4,900.00	20.00	313.65	4,662.71	969.21	-1,015.86	14,522,361.01	2,095,482.96	39° 58' 42.604 N	109° 22' 32.33
5,000.00	20.00	313.65	4,756.68	992.82	-1,040.60	14,522,384.17	2,095,457.79	39° 58' 42.837 N	109° 22' 32.65
5,100.00	20.00	313.65	4,850.65	1,016.43	-1,065.35	14,522,407.32	2,095,432.62	39° 58' 43.070 N	109° 22' 32.97
5,155.43	20.00	313.65	4,902.74	1,029.52	-1,079.07	14,522,420.16	2,095,418.66	39° 58′ 43.200 N	109° 22' 33.15
Start Dro	p -2.00								





Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad

Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Database:

WID Reference.

Survey Calculation Method:

North Reference:

Minimum Curvature
EDM5000-RobertS-Local

@ 5233.00ft (ASSUMED)

Well BONANZA 1023-6E3AS

GL 5219 & RKB 14' @ 5233.00ft (ASSUMED) GL 5219 & RKB 14'

True

lanned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.00	19.11	313.65	4,944.73	1,039.81	-1,089.86	14,522,430.25	2,095,407.68	39° 58' 43.301 N	109° 22' 33.288 W
5,300.00	17.11	313.65	5,039.78	1,061.27	-1,112.34	14,522,451.29	2,095,384.81	39° 58' 43.513 N	109° 22' 33.577 W
5,400.00	15.11	313.65	5,135.84	1,080.42	-1,132.42	14,522,470.08	2,095,364.39	39° 58′ 43.703 N	109° 22' 33.835 W
5,500.00	13.11	313.65	5,232.82	1,097.25	-1,150.05	14,522,486.58	2,095,346.45	39° 58′ 43.869 N	109° 22' 34.062 W
5,600.00	11.11	313.65	5,330.59	1,111.73	-1,165.23	14,522,500.78	2,095,331.01	39° 58' 44.012 N	109° 22' 34.257 V
5,700.00	9.11	313.65	5,429.04	1,123.84	-1,177.93	14,522,512.66	2,095,318.09	39° 58' 44.132 N	109° 22' 34.420 V
5,800.00	7.11	313.65	5,528.03	1,133.58	-1,188.13	14,522,522.21	2,095,307.71	39° 58' 44.228 N	109° 22' 34.551 V
5,900.00	5.11	313.65	5,627.46	1,140.92	-1,195.83	14,522,529.41	2,095,299.88	39° 58' 44.301 N	109° 22' 34.650 V
6,000.00	3.11	313.65	5,727.20	1,145.87	-1,201.02	14,522,534.26	2,095,294.61	39° 58' 44.350 N	109° 22' 34.716 V
6,100.00	1.11	313.65	5,827.12	1,148.41	-1,203.68	14,522,536.75	2,095,291.90	39° 58' 44.375 N	109° 22' 34.751 V
6,155.43	0.00	0.00	5,882.55	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
Start 273	0.45 hold at 6	155.43 MD							
6,200.00	0.00	0.00	5,927.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,300.00	0.00	0.00	6,027.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,400.00	0.00	0.00	6,127.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,500.00	0.00	0.00	6,227.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,600.00	0.00	0.00	6,327.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,700.00	0.00	0.00	6,427.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,733.88	0.00	0.00	6,461.00	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
MESAVE	RDE								
6,800.00	0.00	0.00	6,527.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
6,900.00	0.00	0.00	6,627.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,000.00	0.00	0.00	6,727.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,100.00	0.00	0.00	6,827.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,200.00	0.00	0.00	6,927.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,300.00	0.00	0.00	7,027.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,400.00	0.00	0.00	7,127.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,500.00	0.00	0.00	7,227.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,600.00	0.00	0.00	7,327.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,700.00	0.00	0.00	7,427.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,800.00	0.00	0.00	7,527.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
7,900.00	0.00	0.00	7,627.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,000.00	0.00	0.00	7,727.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,100.00	0.00	0.00	7,827.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,200.00	0.00	0.00	7,927.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,300.00	0.00	0.00	8,027.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,400.00	0.00	0.00	8,127.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,500.00	0.00	0.00	8,227.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 V
8,600.00	0.00	0.00	8,327.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 \
8,700.00	0.00	0.00	8,427.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 \
8,800.00	0.00	0.00	8,527.12	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 \
8,885.88	0.00	0.00	8,613.00	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 \
TD at 888	5.88 - BONA	NZA 1023-6E	3AS PBHL						





Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad

Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

@ 5233.00ft (ASSUMED)

MD Reference: GL 5219 & RKB 14'

.. \_ .

North Reference: Survey Calculation Method:

Database:

True

Minimum Curvature
EDM5000-RobertS-Local

@ 5233.00ft (ASSUMED)

GL 5219 & RKB 14'

Well BONANZA 1023-6E3AS

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BONANZA 1023-6E3AS - plan hits target cent - Circle (radius 25.00		0.00	8,613.00	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58′ 44.378 N	109° 22' 34.756 W

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,425.03	2,337.00	3 5/8"	8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,278.94	1,260.00	GREEN RIVER				
	4,504.44	4,291.00	WASATCH				
	6,733.88	6,461.00	MESAVERDE				

Plan Annotations	S				
1	Measured Depth (ft)	Vertical Depth (ft)	Local Coord +N/-S (ft)	linates +E/-W (ft)	Comment
	300 1300 5155 6155 8886	300 1280 4903 5883 8613	0 119 1030 1149 1149	0 -125 -1079 -1204 -1204	Start Build 2.00 Start 3855.43 hold at 1300.00 MD Start Drop -2.00 Start 2730.45 hold at 6155.43 MD TD at 8885.88

Checked By:	Approved By:	Date:	
,			



Project:

# **SDI**Planning Report



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Site: Bonanza 1023-6K Pad
Well: BONANZA 1023-6E3AS

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Well BONANZA 1023-6E3AS

GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED) GL 5219 & RKB 14'

@ 5233.00ft (ASSUMED) True

Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,885.88	0.00	0.00	8,613.00	1,148.78	-1,204.07	1,664.17	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BONANZA 1023-6E3AS - plan hits target cen - Circle (radius 25.00		0.00	8,613.00	1,148.78	-1,204.07	14,522,537.12	2,095,291.50	39° 58' 44.378 N	109° 22' 34.756 W

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,425.03	2,337.00 8 5/	•	8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,278.94 4,504.44 6,733.88	4,291.00	GREEN RIVER WASATCH MESAVERDE				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coord +N/-S (ft)	dinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	119.26	-125.00	Start 3855.43 hold at 1300.00 MD
5,155.43	4,902.74	1,029.52	-1,079.07	Start Drop -2.00
6,155.43	5,882.55	1,148.78	-1,204.07	Start 2730.45 hold at 6155.43 MD
8,885.88	8,613.00	1,148.78	-1,204.07	TD at 8885.88

Bonanza 1023-6K Pad Surface Use Plan of Operations 1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

## Bonanza 1023-6F Pad

<u>API #</u>	В	SONANZA 1023-6E3AS		
	Surface:	1870 FSL / 1712 FWL	NESW	Lot
	BHL:	2286 FNL / 507 FWL	SWNW	Lot 5
<u>API #</u>	В	SONANZA 1023-6J2AS		
	Surface:	1907 FSL / 1728 FWL	NESW	Lot
	BHL:	2556 FSL / 2100 FEL	NWSE	Lot
<u>API #</u>	В	SONANZA 1023-6K1CS		
	Surface:	1915 FSL / 1732 FWL	NESW	Lot
	BHL:	2170 FSL / 2228 FWL	NESW	Lot
<u>API #</u>	Е	SONANZA 1023-6K2BS		
	Surface:	1897 FSL / 1724 FWL	NESW	Lot
	BHL:	2590 FSL / 1412 FWL	NESW	Lot
<u>API #</u>	Е	SONANZA 1023-6K2CS		
	Surface:	1888 FSL / 1720 FWL	NESW	Lot
	BHL:	2165 FSL / 1485 FWL	NESW	Lot
<u>API #</u>	В	SONANZA 1023-6L2AS		
	Surface:	1861 FSL / 1708 FWL	NESW	Lot
	BHL:	2590 FSL / 541 FWL	NWSW	Lot 6
<u>API #</u>	Е	SONANZA 1023-6L2DS		
	Surface:	1852 FSL / 1704 FWL	NESW	Lot
	BHL:	2087 FSL / 557 FWL	NWSW	Lot 6

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information incorporates by reference the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (KMG). The MDP is available upon request from the BLM-Vernal Field Office.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on June 16, 2010. Present were:

- · Dave Gordon, Suzanne Gray and Dan Emmett BLM;
- · John Slaugh, Brock Slaugh and Mitch Batty-Timberline Engineering & Land Surveying, Inc.; and
- · Roger Parry, Clay Einerson, Grizz Oleen, Sheila Wopsock, Lovell Young, Grizz Oleen, Hal Blanchard, Lance Morton, Tim Donovan, Kathie Zehren, Laura Gianakos and Charles Chase Kerr-McGee

Bonanza 1023-6E3AS/ 1023-6J2AS/ 1023-6K1CS/ 1023-6K2BS/ 1023-6K2CS/ 1023-6L2AS/ 1023-6L2DS Kerr-McGee OII Gas Onshore, L.P.

Bonanza 1023-6K Pad Surface Use Plan of Operations 2 of 7

#### A. Existing Roads:

A) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

The following segments are "onlease", no ROW needed.

 $\pm 1,940'$  (0.4 miles) – Section 6 T10S R23E (NE/4 SW/4) – On-lease UTU38419, from the end of the new road re-route to the southern section line boundary. Please refer to Topo B and Exhibit B2.

#### B. New or Reconstructed Access Roads:

See MDP for additional details on road construction.

 $\pm 80'$  (0.02 miles) – Section 6 T10S R23E (NE/4 SW/4) – On-lease UTU38419, from the edge of pad a new road re-route will be constructed. Please refer to Topo B.

#### **C.** Location of Existing Wells:

A) Refer to Topo Map C.

## D. Location of Existing and/or Proposed Facilities:

See MDP for additional details on Location of Existing and/or Proposed Facilities. Also, please refer to Exhibit B and Topo D- Pad and Pipeline Detail.

This pad will expand the existing pad for the Bonanza 6-2, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on December 29, 2010. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (KMG).

## **GAS GATHERING**

The gas gathering pipeline material: Steel line pipe with fusion bond epoxy coating. The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 5,060$ ° and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

- ±820' (0.2 miles) Section 6 T10S R23E (NE/4 SW/4) On-lease UTU38419, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D-Pad and Pipeline Detail.
- ±2,020' (0.04 miles) Section 6 T10S R23E (NE/4 SW/4) On-lease UTU38419, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to the southern section and lease line boundary. Please refer to Topo D Pad and Pipeline Detail and Exhibit A1.

### The following segments require a ROW.

- ±1,220' (0.2 miles) Section 7 T10S R23E (NW/4 NE/4) Lease UTU38420, BLM surface, New 8" buried gas gathering pipeline from the northern section line boundary to the tie-in at the new 12" buried gas gathering pipeline (NW/4 NE/4). Please refer to Exhibit A1, Line 16.
- ±1,000' (0.2 miles) Section 7 T10S R23E (NW/4 NE/4) Lease UTU38420, BLM surface, New 12" buried gas gathering pipeline from the tie-in (NW/ NE/4) to the tie-in at the existing 16" buried gas gathering pipeline (SE/4 NW/4). Please refer to Exhibit A1, Line 15.

Bonanza 1023-6K Pad Surface Use Plan of Operations 3 of 7

#### LIQUID GATHERING

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 5,060$ ° and the individual segments are broken up as follows:

#### The following segments are "onlease", no ROW needed.

- ±820' (0.2 miles) Section 6 T10S R23E (NE/4 SW/4) On-lease UTU38419, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D Pad and Pipeline Detail.
- ±2,020' (0.04 miles) Section 6 T10S R23E (NE/4 SW/4) On-lease UTU38419, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the southern section and lease line boundary. Please refer to Topo D Pad and Pipeline Detail and Exhibit B, Line 6.

#### The following segments require a ROW.

±2,220' (0.4 miles) – Section 7 T10S R23E (NW/4 NE/4) – Lease UTU38420, BLM surface, New 6" 6" buried liquid gathering pipeline from the northern section line boundary to the tie-in at the existing buried liquid gathering line (SE/4 NW/4 of section 7).

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed buried pipelines will be constructed utilizing existing disturbance when possible. The area of disturbance during construction from the edge of road or well pad will be 30' in width. The total pipeline disturbance width will be 30'. Where possible there will be no additional disturbance during construction, as the road will be utilized for construction vehicles. The liquid and gas gathering lines will be in the same trench.

The proposed trench width for the pipeline would range from 18-48 inch and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. The pipeline will be welded or zap locked along the proposed right-of-way and lowered into place. During construction blasting may occur along the proposed right-of-way when trenching equipment can not cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically tested before being placed into service.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to the MDP for more details regarding final reclamation. Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations to connect the new line to existing facilities and/or for safety purposes. Kerr-McGee requests for a permanent 30' right-of-way that will be maintained for the portion adjacent to the road. The need for the 30' permanent right-of-way is for maintenance and repairs.

When no longer serving a useful purpose, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before termination.

Bonanza 1023-6K Pad Surface Use Plan of Operations 4 of 7

#### The Anadarko Completions Transportation System (ACTS) information:

See MDP for additional details on the ACTS System.

Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an Anadarko Completion Transport System (ACTS) staging pit which will be utilized for other completion operations in the area. The ACTS process will reduce the amount of truck traffic on a field-wide basis, also reducing vehicle emissions and fugitive dust generation.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The refurbished pit will be relined per the guidelines in the MDP. The pit will be refurbished as follows: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit that does not coincide with Kerr-McGee's MDP. Hog fence panels (5' X 16') will be built and painted shadow gray and will be put up on the work side of the pit. Polypropylene netting will be installed over all pits. There will be two 500 bbl temporary frac tanks placed on the location. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The

purpose of the temporary frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will be also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig.

Kerr-McGee requests to keep this netted pit open for one year. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim as stated in the MDP. Kerr-McGee understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

## E. Location and Types of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307 JD Field Services Green River- Section 15, T2N, R22E Permit # 49-2321 R.N. Industries White River- Section 2, T10S, R24E

Bonanza 1023-6K Pad Surface Use Plan of Operations 5 of 7

Permit # 49-2319 R.N. Industries White River- Various Sources
Permit # 49-2320 R.N. Industries Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### F. Construction Materials:

See MDP for additional details on Source of Construction Materials.

#### G. Methods for Handling Waste:

See MDP for additional details on Methods of Handling Waste Materials

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

## H. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities. None are anticipated.

#### I. Well Site Layout:

See MDP and Well Pad Design Summary for additional details on Well Site Layout.

#### J. Plans for Surface Reclamation:

See MDP for additional details on Plans for Reclamation of the Surface.

#### **Site Specific Reclamation Considerations:**

Bonanza 1023-6K Pad Surface Use Plan of Operations 6 of 7

Reclamation Monitoring Reference Point for all wells on Pad (where a reclamation monitoring point has not been established at the time of APD submission, it will be submitted for approval under separate cover prior to surface disturbing activities):

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Bonanza Area Mix	Pure Live Seed lbs/acre
Crested Wheat (Hycrest)	2
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee Plant	0.5
Total	9.75

#### K. Surface/Mineral Ownership:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

#### L. Other Information:

See MDP for additional details on Other Information.

#### **Onsite Specifics:**

Construction: 30 Mil Double Felt
Facilities: Will be painted Shadow Grey
Top Soil: Need to save 4" topsoil

#### **Resource Reports:**

A Class I literature survey was completed on August 20, 2010 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 10-066b.

A paleontological reconnaissance survey was completed on May 11, 2010 by SWCA Environmental Consultants. For additional details please refer to report UT10-14314-28.

Biological field survey was completed on May 3, 2010 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-218.

#### **Right-of-Ways (ROW):**

See MDP for additional information on ROW

Bonanza 1023-6K Pad Surface Use Plan of Operations 7 of 7

#### M. Lessee's or Operators' Representative & Certification:

Gina T. Becker Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6086 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

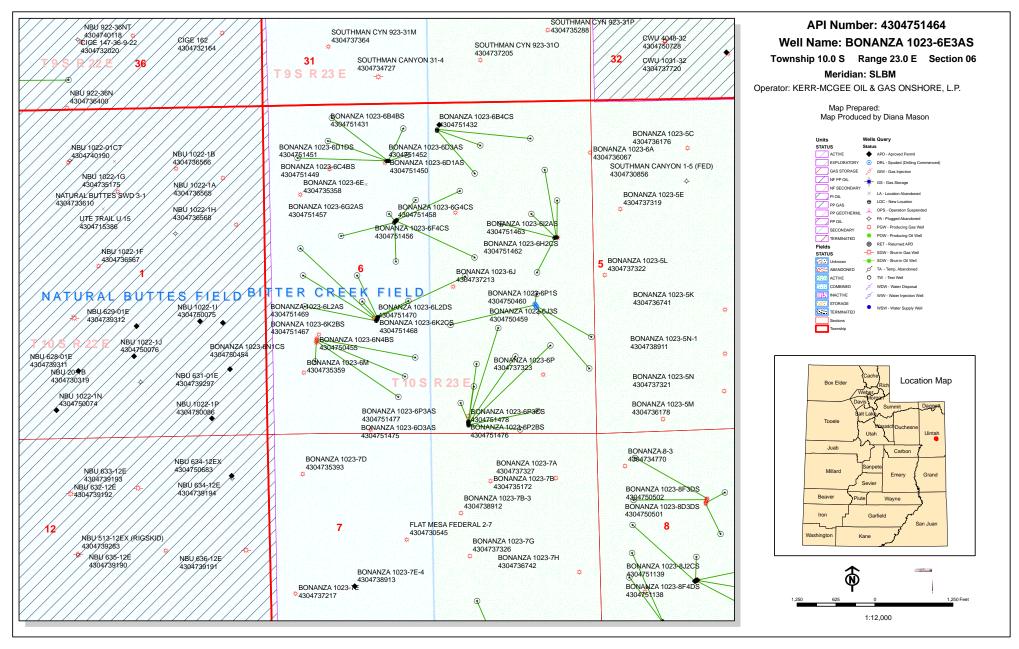
Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

December 29, 2010

Date



## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 1/4/2011 **API NO. ASSIGNED:** 43047514640000

WELL NAME: BONANZA 1023-6E3AS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6086

**CONTACT:** Gina Becker

PROPOSED LOCATION: NESW 06 100S 230E **Permit Tech Review:** 

> **SURFACE: 1870 FSL 1712 FWL Engineering Review:**

> **BOTTOM:** 2286 FNL 0507 FWL Geology Review:

**COUNTY: UINTAH** 

**LATITUDE: 39.97582 LONGITUDE:** -109.37217

**UTM SURF EASTINGS: 639007.00** NORTHINGS: 4426133.00

FIELD NAME: NATURAL BUTTES **LEASE TYPE:** 1 - Federal

**LEASE NUMBER: UTU38419** PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 1 - Federal **COALBED METHANE: NO** 

**RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** ✓ PLAT R649-2-3.

Bond: FEDERAL - WYB000291 Unit:

**Potash** R649-3-2. General

Oil Shale 190-5

R649-3-3. Exception **Oil Shale 190-3** 

Oil Shale 190-13 **Drilling Unit** 

Board Cause No: Cause 179-14 Water Permit: Permit #43-8496

Effective Date: 6/12/2008 **RDCC Review:** 

Siting: 460' Fr Exterior Drilling Unit Boundary **Fee Surface Agreement** 

✓ Intent to Commingle ✓ R649-3-11. Directional Drill

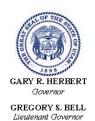
**Commingling Approved** 

**Comments:** Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason

API Well No: 43047514640000



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## **Permit To Drill**

\*\*\*\*\*\*

Well Name: BONANZA 1023-6E3AS

**API Well Number:** 43047514640000

**Lease Number:** UTU38419 **Surface Owner:** FEDERAL **Approval Date:** 1/19/2011

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

## **Commingle:**

In accordance with Board Cause No. 179-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
OR

API Well No: 43047514640000

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

## **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007)

## RECEIVED UNITED STATES

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

JAN 11 4 2019-

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

BUREAU OF LAND	שושים די ויוריכ	5. Lease Serial No. UTU38419	
APPLICATION FOR PERMIT	TO DRILL OR REENTER 2011	6. If Indian, Allottee or Tribe Name	e
1a. Type of Work: DRILL REENTER		7. If Unit or CA Agreement, Name	and No.
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Oth		8. Lease Name and Well No. BONANZA 1023-6E3AS	·····
2. Name of Operator Contact: KERR MCGEE OIL & GAS ONSHOR Mali: GINA.BE	GINA T BECKER ECKER@ANADARKO.COM	9. API Well No. 43.047.5146	
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6086 Fx: 720-929-7086	10. Field and Pool, or Exploratory NATURAL BUTTES BONANZA	
4. Location of Well (Report location clearly and in accorded	ance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Su	rvey or Area
At surface NESW 1870FSL 1712FWL At proposed prod. zone Lot 5 2286FNL 507FWL 39	. 39.97581 N Lat, 109.37270 W Lon ).97896 N Lat, 109.37700 W Lon	Sec 6 T10S R23E Mer SLI SME: BLM	В
<ol> <li>Distance in miles and direction from nearest town or post APPROXIMATELY 51.7 MILES SOUTH OF VER</li> </ol>		12. County or Parish UINTAH	13. State UT
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)</li> <li>507</li> </ol>	16. No. of Acres in Lease 516.80	17. Spacing Unit dedicated to this	well
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file	
884	8886 MD 8613 TVD	WYB000291	
21. Elevations (Show whether DF, KB, RT, GL, etc. 5221 GL	22. Approximate date work will start 06/30/2011	23. Estimated duration 60-90 DAYS	
	24. Attachments		
The following, completed in accordance with the requirements of	f Onshore Oil and Gas Order No. 1, shall be attached to	this form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Systems SUPO shall be filed with the appropriate Forest Service Off</li> </ol>	Item 20 above).  5. Operator certification 6. Such other site specific initial authorized officer.	ons unless covered by an existing bond formation and/or plans as may be requ	•
25. Signature (Electronic Submission)	Name (Printed/Typed) GINA T BECKER Ph: 720-929-6086	Date 01/	/04/2011
Title REGULATORY ANALYST II	-	<u> </u>	
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka	MQst.	0 7 201
Assistant Field Manager	VERNAL FIELD OFFICE		

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

DOGN

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

NOV 2 8 2011

RECEIVED

Electronic Submission #99935 verified by the BLM Well Information System

For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal

Committed to AFMSS for processing by ROBIN R. HANSEN on 01/05/2011 (11RRH0724AE) GAS & MINING



CONDITIONS OF APPROVAL ATTACHED

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

10PRHOZ95AE

NOS 4/26/2010



## UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

**VERNAL. UT 84078** 

(435) 781-4400



## CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

API No:

Kerr McGee Oil & Gas Onshore

1023-6E3AS

43-047-51464

Location:

Agreement:

NESW, Sec. 6, T10S, R23E

UTU-38419 Lease No:

N/A

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### NOTIFICATION REQUIREMENTS

-	Forty-Eight (48) hours prior to construction of location and access roads.
-	Prior to moving on the drilling rig.
-	Twenty-Four (24) hours prior to spudding the well.
	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn opreport@blm.gov.
-	Twenty-Four (24) hours prior to initiating pressure tests.
-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.
	-

Page 2 of 6 Well: Bonanza 1023-6E3AS 11/3/2011

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

#### **General Conditions of Approval**

- Kerr McGee will adhere to all applicant committed conservation measures and conservation recommendations that are stated in the USFW's "Final Biological Opinion for the Anadarko Petroleum Corporation Natural Buttes Unit and Bonanza Area Natural Gas Development Project.
- The Operator will follow the Green River District Reclamation Guidelines for Reclamation.
- During operations if any vertebrate paleontological resources are discovered, in accordance with Section 6 of Form 3100-11 and 43 CFR 3162.1, all operations affecting such sites shall be immediately suspended, and all discoveries shall be left intact until authorized to proceed by the Authorized Officer. The appropriate Authorized Officer of the Vernal BLM office shall be notified within 48 hours of the discovery, and a decision as to the preferred alternative/course of action will be rendered.

## Site Specific COA's

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were previously operated outside the Uinta Basin, to prevent weed seed introduction.
- All disturbance areas shall be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of project or until desirable vegetation is established.
- Noxious and invasive weeds will be controlled throughout the area of project disturbance.
- Noxious weeds will be inventoried and reported to BLM in the annual reclamation report. Where an
  integrated pest management program is applicable, coordination has been undertaken with the
  state and local management program (if existing). A copy of the pest management plan will be
  submitted for each project.
- A pesticide use permit (PUP) will be obtained for the project, if applicable.

Page 3 of 6 Well: Bonanza 1023-6E3AS 11/3/2011

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- Surface casing cement shall be brought to surface.
- Production casing cement shall be brought 200' up and into the surface casing.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- <u>Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in</u> advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
  drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
  No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
  test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
  log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
  encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
  Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each

Page 4 of 6 Well: Bonanza 1023-6E3AS 11/3/2011

encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: Bonanza 1023-6E3AS 11/3/2011

#### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - o Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be
  reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported
  verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will
  be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of
  Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

Page 6 of 6 Well: Bonanza 1023-6E3AS 11/3/2011

and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
  be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to
  the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first.
  All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All
  product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in
  accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
  Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
  order that a representative may witness plugging operations. If a well is suspended or abandoned,
  all pits must be fenced immediately until they are backfilled. The "Subsequent Report of
  Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of
  the well bore, showing location of plugs, amount of cement in each, and amount of casing left in
  hole, and the current status of the surface restoration.

Sundry Number: 22228 API Well Number: 43047514640000

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9
ı	ES ING	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419	
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5MATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: D6 Township: 10.0S Range: 23.0E Meridi	ian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
1/19/2012	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
_	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:
44 DESCRIPE PROPOSED OR			<u> </u>
Kerr-McGee Oil & G an extension to this	completed operations. Clearly show a sas Onshore, L.P. (Kerr-McGe APD for the maximum time a with any questions and/or co	ee) respectfully requests allowed. Please contact	Approved by the Utahuaiyizign2012 Oil, Gas and Mining
			Date:
			Ву:
NAME (PLEASE PRINT)	PHONE NUMBE		
Danielle Piernot	720 929-6156	Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 1/17/2012	

Sundry Number: 22228 API Well Number: 43047514640000



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047514640000

API: 43047514640000 Well Name: BONANZA 1023-6E3AS

Location: 1870 FSL 1712 FWL QTR NESW SEC 06 TWNP 100S RNG 230E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 1/19/2011

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the Yes  No	he ownership changed, if so, has the surface agreement been updated? 🔵
<ul> <li>Have any wells been drilled in t requirements for this location?</li> </ul>	he vicinity of the proposed well which would affect the spacing or siting  Yes  No
Has there been any unit or other proposed well?	er agreements put in place that could affect the permitting or operation of thi No
Have there been any changes to proposed location?     Yes (	o the access route including ownership, or rightof- way, which could affect th No
• Has the approved source of wat	ter for drilling changed? 🔘 Yes 🌘 No
	hanges to the surface location or access route which will require a change in at the onsite evaluation?  Yes  No
• Is bonding still in place, which o	covers this proposed well? 🌘 Yes 🔘 No
nature: Danielle Piernot	Date: 1/17/2012

Sig

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9
ı	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly reenter plugged wells, or to drill horizo n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: D6 Township: 10.0S Range: 23.0E Merio	lian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 3/8/2012	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU TRIPPLE A BU RAN 14" 36.7# SCI	COMPLETED OPERATIONS. Clearly show a JCKET RIG. DRILLED 20" CON HEDULE 10 PIPE. CMT W/28 (ELL ON 03/08/2012 AT 1330)	IDUCTOR HOLE TO 40'. SX READY MIX. SPUD	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 16, 2012
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMB 435 781-7024	ER TITLE Regulatory Analyst	
SIGNATURE		DATE	
N/A		3/14/2012	

Sundry Number: 23975 API Well Number: 43047514640000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURC	ES	FORM 9
ı	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 7 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5MATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 06 Township: 10.0S Range: 23.0E Merid	lian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOF	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
17	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
3/18/2012	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Bate of Work Completion.	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date.	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	all pertinent details including dates, o	lepths, volumes, etc.
Specifically, the operation, a surface of	quests approval for changes perator requests approval for casing change and a product e previously approved drillin	r a closed loop drilling ion casing change. All	Accepted by the Utah Division of Oil, Gas and Mining Date: March 20, 2012
Ple	ease see the attachment. Tha	nk you.	By: Der K Quit
			· ·
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMB</b> 720 929-6304	ER TITLE Regulartory Analyst	
SIGNATURE N/A		DATE 3/19/2012	

Bonanza 1023-6E3AS Drilling Program
1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

### BONANZA 1023-6E3AS

Surface: 1870 FSL / 1712 FWL NESW BHL: 2286 FNL / 507 FWL SWNW

Section 6 T10S R23E

Uintah County, Utah Mineral Lease: UTU-38419

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,260'	
Birds Nest	1,524'	Water
Mahogany	1,887'	Water
Wasatch	4,291'	Gas
Mesaverde	6,461'	Gas
Sego	8,613'	Gas
TVD	8,613'	
TD	8,886'	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

## 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

#### 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

#### 6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

Bonanza 1023-6E3AS Drilling Program 2 of 7

#### 7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8613' TVD, approximately equals 5,512 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,605 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

#### 8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Bonanza 1023-6E3AS Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

Bonanza 1023-6E3AS Drilling Program
4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

#### 10. <u>Other Information:</u>

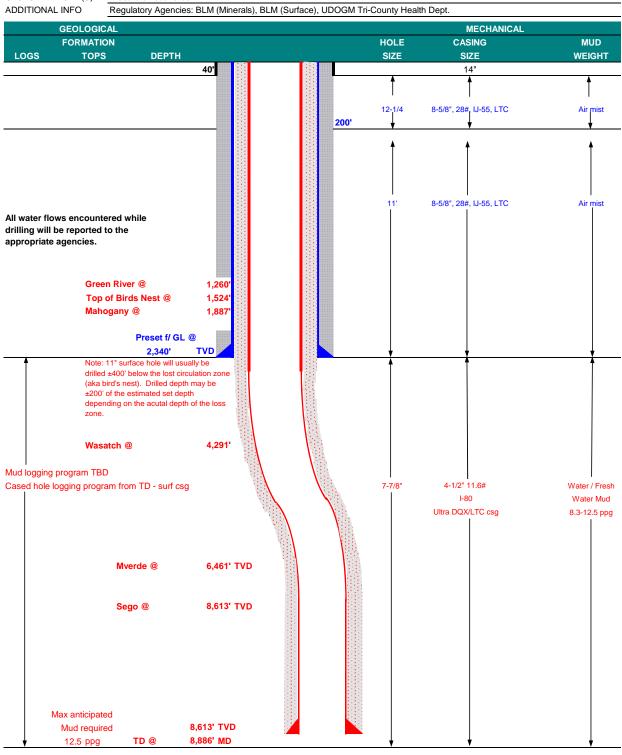
Please refer to the attached Drilling Program.

Bonanza 1023-6E3AS Drilling Program 5 of 7



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KE	MPANY NAME KERR-McGEE OIL & GAS ONSHORE LP						9, 2012	
WELL NAME BO	ONANZA 10	23-6E3AS			TD	8,613'	TVD	8,886' MD
FIELD Natural But	tes	COUNTY	Uintah S	TATE Uta	h	FINIS	HED ELEVATION_	5,219'
SURFACE LOCATION	NESW	1870 FSL	1712 FWL	Sec 6	T 10S	R 23E		
	Latitude:	39.975806	Longitude	: -109.37	2704		NAD 83	
BTM HOLE LOCATION	SWNW	2286 FNL	507 FWL	Sec 6	T 10S	R 23E		
	Latitude:	39.978960	Longitude	: -109.37	7001		NAD 83	
OBJECTIVE ZONE(S)	Wasatch/M	lesaverde						
	D 1.4	. DIM	(A.C. ) DIA	1.00	110001	T:0 . I	. H. D	



Bonanza 1023-6E3AS Drilling Program
6 of 7



#### KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

CONDUCTOR SURFACE

**PRODUCTION** 

									LTC	DQX
SIZE	INTE	RVAL		WT.	GR.	CPLG.	BURST	BURST COLLAPSE		
14"	0	-40'								
							3,390	1,880	348,000	N/A
8-5/8"	0	to	2,340	28.00	IJ-55	LTC	2.31	1.72	6.07	N/A
							7,780	6,350	223,000	267,000
4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.13		3.20
4-1/2"	5,000	to	8,886'	11.60	I-80	LTC	1.11	1.13	6.12	

**DESIGN FACTORS** 

#### Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water	to surface,	option 2 wil	l be utilized	
Option 2 LEAD	1,840'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	3,786'	Premium Lite II +0.25 pps	300	35%	12.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,100'	50/50 Poz/G + 10% salt + 2% gel	1,210	35%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

**PRODUCTION** 

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

1 centralizer on the first 3 joints and one every third joint thereafter.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

 $\underline{ \text{Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.} \\$ 

DRILLING ENGINEER:

DATE: \_
Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT:

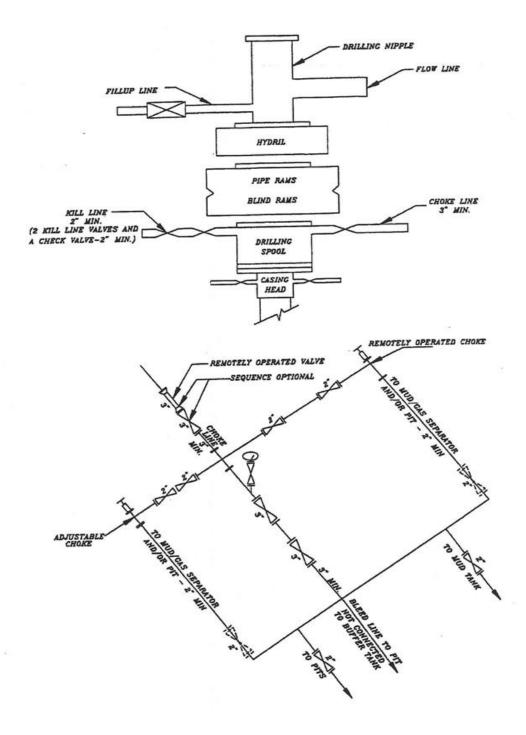
DATE:

Kenny Gathings / Lovel Young

RECEIVED: Mar. 19, 2012

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A BONANZA 1023-6E3AS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

#### Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED: Mar. 19, 2012

	STATE OF UTAH		FORM 9			
ι	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419			
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
	oposals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802	<b>PHONE NUMBER:</b> 17 3779 720 929	9. FIELD and POOL or WILDCAT: -65MATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 10.0S Range: 23.0E Mei	ridian: S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
3/20/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
MIRU AIR RIG ON M RAN SURFACE CAS	COMPLETED OPERATIONS. Clearly show ARCH 18, 2012. DRILLED SIGNG AND CEMENTED. WELL OF CEMENT JOB WILL BE INC	URFACE HOLE TO 2,550'. . IS WAITING ON ROTARY CLUDED WITH WELL	depths, volumes, etc.			
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUM</b> 720 929-6304	IBER TITLE Regulartory Analyst				
SIGNATURE N/A		<b>DATE</b> 3/21/2012				

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM											
Operator:	KERR McGEE OIL & GAS ONSHORE LP	Operator Account Number: N 2995									
Address:	1368 SOUTH 1200 EAST										
	city VERNAL										
	state UT zip 84078	Phone Number: (435) 781-7024									

API Number	Well	Name	QQ	Sec	Twp	Rng	County			
4304751468	BONANZA 1023-6K	BONANZA 1023-6K2CS NESW 6 10S 23E				UINTAH				
Action Code	Current Entity Number				te	1	ty Assignment ifective Date			
A	99999	19453		3/8/2012	2	31	20/2013			
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 03/08/2012 AT 1700 HRS. BHU NESW										

API Number	Well	Name	QQ	Sec	Twp	Rng	County	
4304751464	BONANZA 1023-6E3	BAS	NESW	6	105	23E UINTAH		
Action Code	Current Entity Number	New Entity Number	s	pud Da	te	Entity Assignme Effective Date		
Ω	99999	18454		3/8/201	2	3/6	2012013	
Comments: MIRU SPU	J TRIPPLE A BUCKET D WELL ON 03/08/2013	RIG. WSM 2 AT 1330 HRS. BH		'n	 .)	_		

Well 3

API Number	Well	Twp	p Rng County						
4304751469	BONANZA 1023-6L2	AS	NESW	6	108	23E UINTAH			
Action Code	Current Entity Number	s	Spud Date			tity Assignment Effective Date			
A	99999	19:455		3/8/201	2	3	20 120R		
Comments: MIRU TRIPPLE A BUCKET RIG. WSMVD SPUD WELL ON 03/08/2012 AT 1030 HRS. BHL DWSW									

## **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED

Name (Please Print)

SHEILA WOPSOCK

Signature **REGULATORY ANALYST** 

3/13/2012 Date

(5/2000)

MAR 1 5 2012

	STATE OF UTAH		FORM 9							
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419							
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:									
	posals to drill new wells, significantly or reenter plugged wells, or to drill horizor n for such proposals.		7.UNIT or CA AGREEMENT NAME:							
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000							
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES							
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH							
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 0	HIP, RANGE, MERIDIAN: 06 Township: 10.0S Range: 23.0E Meridi	an: S	STATE: UTAH							
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA							
TYPE OF SUBMISSION		TYPE OF ACTION								
	ACIDIZE	ALTER CASING	CASING REPAIR							
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME							
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE							
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION							
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK							
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION							
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON							
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL							
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION							
5/13/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:							
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU ROTARY RIG. FINISHED DRILLING FROM 2550' TO 8985' ON  5/12/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED XTREME 12 RIG ON 5/13/2012 @  19:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION  ACTIVITIES.  Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 15, 2012										
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBE 720 929-6029	R TITLE Regulatory Analyst I								
SIGNATURE	120 020 0020	DATE								
N/A		5/15/2012								

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for procurrent bottom-hole depth, IFOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PH n Street, Suite 600, Denver, CO, 80217 37	ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>fip, range, Meridian:</b> 06 Township: 10.0S Range: 23.0E Meridian:	S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly show all pure the month of June 2012. Well		CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER:  Pepths, volumes, etc.  Accepted by the Utah Division of Oil, Gas and Mining  FOR RECORD ONLY  July 10, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 7/6/2012	

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18tl	PHO h Street, Suite 600, Denver, CO, 80217 377	<b>DNE NUMBER:</b> 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: (	HIP, RANGE, MERIDIAN: 06 Township: 10.0S Range: 23.0E Meridian:	S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
SUBSEQUENT REPORT	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
Date of Work Completion:	L DEEPEN L	FRACTURE TREAT	NEW CONSTRUCTION
	☐ OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date: 8/2/2012	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
0/2/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
	COMPLETED OPERATIONS. Clearly show all peopre the month of July 2012. Well	_	epths, volumes, etc.  Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 02, 2012
Cara Mahler	720 929-6029	Regulatory Analyst I	
SIGNATURE N/A		<b>DATE</b> 8/2/2012	

	FORM 9					
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419			
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PH n Street, Suite 600, Denver, CO, 80217 37	HONE NUMBER: 179 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 06 Township: 10.0S Range: 23.0E Meridian	ı: S	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	T, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
 	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	U TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
8/27/2012						
	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
THE SUBJECT WELL AT 17:00 HOURS	COMPLETED OPERATIONS. Clearly show all p WAS PLACED ON PRODUCTION THE CHRONOLOGICAL WELL ED WITH THE WELL COMPLETIC	N ON AUGUST 27, 2012 HISTORY WILL BE	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 31, 2012			
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE				
Jaime Scharnowske	720 929-6304	Regulartory Analyst				
SIGNATURE N/A		<b>DATE</b> 8/31/2012				

	STATE OF UTAH		FORM 9
[	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU38419
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly deep eenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: BONANZA 1023-6E3AS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047514640000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PHC n Street, Suite 600, Denver, CO, 80217 377	ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1870 FSL 1712 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	IIP, RANGE, MERIDIAN: 16 Township: 10.0S Range: 23.0E Meridian:	S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐ :	SI TA STATUS EXTENSION	APD EXTENSION
9/4/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
10 DECODINE DRODOGED OR			<u> </u>
	COMPLETED OPERATIONS. Clearly show all pe		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 06, 2012
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 9/4/2012	

Form 3160-4 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

WELL COMPLETION	OR RECC	MPLETION	<b>REPORT</b>	AND	LOG
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	WELL (	COMPL	ETION C	RRE	CO	MPLET	ΓΙΟΙ	N REPO	ORT	AND L	.OG				ase Serial I TU38419	No.	
1a. Type of		Oil Well			o I		) Otł							6. If	Indian, All	ottee or	Tribe Name
b. Type of	f Completion	Othe		□ Wo	ork Ov	er 🛚	Dee	pen _	] Plug	Back	🗖 Di	iff. Re	esvr.		nit or CA A		nt Name and No.
2. Name of KERR	2. Name of Operator Contact: CARA MAHLER KERR MCGEE OIL & GAS ONSHORE-Mail: cara.mahler@anadarko.com  8. Lease Name and Well No. BONANZA 1023-6E3AS													Il No.			
3. Address 1099 18TH STREET, SUITE 1800 DENVER, CO 80202 3a. Phone No. (include area code) Ph: 720-929-6029 9. API Well No. 43-047-51464																	
4. Location of Well (Report location clearly and in accordance with Federal requirements)*  10. Field and Pool, or Exploratory NATURAL BUTTES																	
At surface NESW 18/0FSL 1/12FWL 39.975806 N Lat, 109.372704 W Lon 11. Sec., T., R., M., or Block and Survey																	
At top prod interval reported below SWNW 2291FNL 507FWL or Area Sec 6 T10S R23E Mer SLB																	
At total depth SWNW Lot 5 2293FNL 522FkL SH W UINTAH UT  14. Date Spudded 15. Date T.D. Reached 16. Date Completed 17. Elevations (DE KB PT GL)*																	
03/08/2			05	/12/20	12				D & 08/23	A 3/2012	Ready	to Pr	od.			19 GL	, KI, GD)
18. Total D	epth:	MD TVD	8985 8656		19.	Plug Bac	k T.I		ID VD	89 86			20. Dep	th Brid	ige Plug Se		MD TVD
21. Type E CBL/GI	lectric & Oth R/CCL/TEM	ner Mecha IP	nical Logs R	un (Sub	mit c	opy of eac	ch)				ν	Vas D	ell cored ST run? ional Sur	? vey?	<b>⊠</b> No	☐ Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing ar	nd Liner Rec	ord (Repo	rt all strings														\
Hole Size	Size/G	rade	Wt. (#/ft.)	To (M	-	Botton (MD)		Stage Cem Deptl		No. o Type o	f Sks. a		Slurry (BBl		Cement 7	Гор*	Amount Pulled
20.000 11.000	T	000 STL	36.7		0	0,4	40					28					
7.875	17	25 IJ-55 500 I-80	28.0 11.6		<u>0</u> 0		516 975	·				1 <u>150</u> 1495				2300	
												1700				2000	
24. Tubing	Record			<u> </u>		<u> </u>				L					-		
	Depth Set (M	(ID) P	acker Depth	(MD)	Si	ze D	epth	Set (MD)	P	acker De	oth (M)	D)	Size	De	pth Set (M	D) [1	Packer Depth (MD)
2.375		8378									y 122 (2123				pta bet (IVI	,	dekei Depai (NID)
25. Produci				<del></del>			26. I	Perforation									
A)	ormation WASA	АТСЫ	Тор	6161	Во	6631		Perfo	rated	Interval 6161 T	0 662	+	Size 0.36		lo. Holes	OPEN	Perf. Status
B)	MESAVE			7460		8797			·	7460 T		_	0.36			OPEN	
C)																<u> </u>	
D)				1								$oldsymbol{ol}}}}}}}}}}}}}}}}}}$					
	racture, Treat Depth Interva		nent Squeeze	, Etc.					A .		1.55	63.7					
			797 PUMP 8	,647 BI	BLS S	LICK H2C	& 18	36.000 LBS		nount and		*	aterial			RE	CEIVED
					***********												SEIVED
										***************************************						SEP	2 5 2012
28. Product	ion - Interval	A								<del></del>		····	·····	<del></del>	DIV	OF OII	040.044
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	W	ater	Oil Gr			Jas		Producti	on Method	OF OII	GAS & MINING
08/27/2012	08/29/2012	24	Troduction	0.0		1969.0	Bi	0.0	Corr. 2	AFI		Gravity			FLOV	VS FRO	M WELL
Choke Size 20/64	Tbg. Press. Flwg. 1500 SI	Csg. Press. 1997.0	24 Hr. Rate	Oil BBL 0		Gas MCF 1969	W: BE	ater BL O	Gas:O Ratio	il	V	Vell Sta	atus GW				
	tion - Interva								<u> </u>		L	• `		<del></del>			· · · · · · · · · · · · · · · · · · ·
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF	W. BE	ater BL	Oíl Gr Corr.			Jas Gravity		Producti	on Method		
Choke Size	Tog. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF	W: BE	ater BL	Gas:O Ratio	il	ľ	Well Sta	atus				
(C 7	<del> </del>		<u> </u>	<u> </u>					1								

20L D		-1.0										
	uction - Interv		1_	· · · · · · · · · · · · · · · · · · ·		<u> </u>						
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API		Gas Gravity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	V	Well Status			
28c Prod	uction - Interv	ol D			<u> </u>							
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravity	12		D 1 2 2 2 2 2		
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		Gas Production Method Gravity			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio					
29. Dispo	sition of Gas(	Sold, used j	for fuel, vent	ed, etc.)	. <del> </del>							
30. Sumn	ary of Porous	Zones (Inc	clude Aquife	rs):	· · · · · · · · · · · · · · · · · · ·				31. For	mation (Log) Mar	kers	
tests,	all important including dept coveries.	zones of po h interval t	orosity and contested, cushic	ontents there on used, tim	eof: Cored e tool oper	intervals and a n, flowing and s	ll drill-stem hut-in pressu	res				
	Formation		Тор	Bottom		Description	s, Contents, e	etc.		Name		Top
Meas. E   Meas											Meas. Depth 1244 1527 2004 4598 6769	
	enclosed atta		(1 full set re	q'd.)	**	2. Geologic I	Report		3. DST Rep	oort	4. Direction	al Survey
5. Su	ndry Notice fo	or plugging	and cement	verification		6. Core Anal	ysis		7 Other:			
34. I here	by certify that	the forego	ing and attac	hed informa	ation is cor	nplete and corr	ect as determi	ined from	all available	records (see attac	hed instructio	ns):
			Electi	ronic Subm	ission #15	1901 Verified OIL & GAS (	by the BLM	Well Inf	ormation Sys	•		
Name	(please print)	CARA M	AHLER				Title	AUTHO	RIZED REP	RESENTATIVE		
Signa	ture	(Electron	ic Submissi	on)			Date 09/19/2012					
Title 18 U	J.S.C. Section ited States any	1001 and 7	Title 43 U.S. itious or frad	C. Section 1 ulent statem	212, make ents or rep	e it a crime for a presentations as	ny person kn to any matter	owingly r within i	and willfully ts jurisdiction	to make to any de	partment or a	gency

# **Operation Summary Report**

 Well: BONANZA 1023-6E3AS YELLOW
 Spud Date: 3/18/2012

 Project: UTAH-UINTAH
 Site: BONANZA 1023-6K PAD
 Rig Name No: XTC 12/12, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 12/8/2011
 End Date: 5/13/2012

Active Datum: RKB @5,234.00usft (above Mean Sea

UWI: NE/SW/0/10/S/23/E/6/0/0/26/PM/S/1870/W/0/1712/0/0

Level)									
Date	s	Time tart-End	Duration	Phase	Code	Sub Code	P/U	MD From (usff)	Operation
3/18/2012	0:00	- 2:00	2.00	DRLSUR	01	С	Р		SKID RIG TO LOCATON. RIG UP
	2:00	- 4:30	2.50	DRLSUR	01	В	P		WELD ON HEAD, RIG UP BLOWIE LINE
	4:30	- 5:00	0.50	DRLSUR	01	В	Р		PU 12.25" BHA
	5:00	-· 7:00	2.00	DRLSUR	02	D	P		SPUD DRLG 12.25" SURFACE HOLE F/40' T/ 210' ROP=110 ' @ FPH WOB= 24-28K RPM= 55/105 SPP= 900/520 GPM= 620 TRQ= 2800/1700 PU/SO/RT= 28/23/26
_		- 8:30	1.50	DRLSUR	06	Α	Р		TOH FOR DIR TOOLS. LAY DOW 12.25", PU 11.00" AND DIR TOOLS
	8:30	- 9:00	0.50	DRLSUR	06	Α	P		TIH
	9:00	- 0:00	15.00	DRLSUR	02	D	P		DRLG 11.00" SURFACE HOLE F/ 210' T/ 1790' ROP=105 ' @ FPH WOB= 24-28K RPM= 55/105 SPP= 1150/900 GPM= 605 TRQ= 2800/1700 PU/SO/RT= 90/73/80 LOST CIRC 1720', ON AIR 900CFM
3/19/2012	0:00	- 9:00	9.00	DRLSUR	02	D	P		DRLG 11.00" SURF HOLE F/ 1720' T/ 2550' ROP=105 ' @ FPH WOB= 24-28K RPM= 55/105 SPP= 1150/870 GPM= 605 TRQ= 2800/1700 PU/SO/RT= 89/74/84 ON AIR 1000CFM
	9:00	- 10:00	1.00	DRLSUR	05	С	Р		CIRC PRIOR TO TRIP
	10:00	- 13:30	3.50	DRLSUR	06	D	P		POOH, LAY DOWN BIT AND DIR TOOLS, RIG UP TO RUN CSG
		- 17:00	3.50	DRLSUR	12	С	P		PJSM /// RUN 58 JT'S, 8-5/8", 28#, J-55, LT&C CSG /// SHOE SET @ 2500' /// BAFFLE @ 2454'. ORIGINAL CSG DEPTH 2521'. COULD NOT GET LAST JOINT DOWN. 21.10 FOOT SHORT. COMMUNICATION WITH THE BONANZA 6-2, DURING CASING RUN. WILL CEMENT CURRENT WELL, AND PRIOR 2 WELLS TO SURFACE.
	17:00	- 0:00	7.00	DRLSUR	12	E	P		PJSM /// RIG UP AND START CEMENTING CURRENT WELL TO SURFACE, AND WELLS 1 AND 2 ON PAD TO SURFACE.

					Opera	ition S	umma	Report
Well: BONANZ	A 1023-6	E3AS YELLO	Ν	and the same of th				pud Date: 3/18/2012
Project: UTAH-	UINTAH			Site: BO	NANZA 1	023-6K P/	AD	Rig Name No: XTC 12/12, CAPSTAR 310/310
Event: DRILLIN	IG			Start Dat	te: 12/8/20	)11		End Date: 5/13/2012
Active Datum: F Level)	RKB @5,2	234.00usft (ab	ove Mean Se	a	UWI: N	E/SW/0/1	0/S/23/E/6/	0/26/PM/S/1870/W/0/1712/0/0
Date	s	Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
3/20/2012	0:00	- 6:00	6.00		13	A	Р	//PJSM// PRESSURE TEST LINES TO 2000 PSI. PUMP 150 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP (300 SX) 61.4 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT. DROP PLUG ON FLY. DISPLACE W/ 154.5 BBLS OF H20. FINAL LIFT OF 500 PSI AT 4 BBL/MIN. BUMP PLUG W/800 PSI HELD FOR 5 MIN. FLOAT DID HOLD. PUMP (600 SX) 123 BBLS OF SAME TAIL CEMENT W/ 4% CALC. OVER 5 TOP OUTS DOWN BACKSIDE. WAIT 1.5 HOURS, IN BETWEEN EACH TOP OUT, SHUT DOWN AND CLEAN TRUCK. CEMENT TO SURFACE.
								WELL #2, BONANZA 1023-6L2AS, TOP OUT CEMENT TO SURFACE 250 SACKS.
								RELEASE RIG 0600. RD TO SKID TO BONANZA 1023-6K2CS, WELL 4 OF 7
5/8/2012	7:30	- 9:00	1.50	MIRU	01	С	Р	PULL CAT WALK FORWARD. INSTALL SKID RAILS. BREAK DOWN CHOKE LINE TO SKID. PREPARE RIG FOR SKID AND SKID RIG FORWARD 10'. RESET CATWALK AND INSTALL VIBRATING
								HOSES. CENTER AND LEVEL RIG OVER HOLE.
	9:00	- 10:00	1,00	MIRU	14	Α	P	NIPPLE UP BOPE. TIGHTEN CAMERON QUICK FLANGE. ADD 22' EXTENSION TO CHOKE LINE. ADD EXTENSION TO FLOW LINE.
	10:00	- 15:30	5.50	MIRU	15	A	P	HOLD SAFETY MEETING. TEST TOP DRIVE VALVE, I-BOP VALVE, FLOOR VALVE, DART VALVE, PIPE AND BLIND RAMS, INSIDE AND OUTSIDE KILL LINE VALVES INSIDE CHOKE LINE VALVE, HCR VALVE, CHOKE LINE, CHOKE MANIFOLD VALVES AND CHOKES TO 5000 PSI FOR 10 MINUTES AND 250 PSI FOR 5 MINUTES. TEST ANNULLAR TO 2500 PSI FOR 10 MIN AND 250 PSI FOR 5 MINUTES. TESTING CASING TO 1500 PSI FOR 30 MINUTES.
	15:30	- 16:00	0.50	MIRU	15	Α	P	INSTALL WEAR BUSHING WITH 8" ID WITH EVEN WEAR.
	16:00	- 17:00	1.00	MIRU	06	Α	P	P/U WEATHERFORD 1.83 BH .16 RPG MOTOR (SN 625-3672).  MADE UP HUGHES Q506F BIT W/ 6-15'S (SN 7029499). SCRIBED MOTOR.  P/U DOUBLE PIN, NON MAG TOOL CARRIER AND EM SUB.  INSTALL EM TOOL.  P/U MONEL AND CROSSOVER TO HWDP.
	17:00	- 19:30	2.50	MIRU	02	D	P	TRIP IN HOLE WITH HEAVY WEIGHT DRILL PIPE @ 950' INSTALL NEW ROTATING HEAD RUBBER. TRIP IN HOLE WITH DRILL PIPE. TAG CEMENT 2400'.

9/10/2012

11:38:02AM

	1023-6E3AS YELLO	W			Spud Date: 3/18/2012							
Project: UTAH-U	INTAH		Site: BON	IANZA 10	23-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310				
vent: DRILLING	3		Start Date	e: 12/8/20	)11		**************	End Date: 5/13/2012				
ctive Datum: RI	KB @5,234.00usft (a	oove Mean Se	ea	UWI: NI	E/SW/0/1	0/S/23/E/	6/0/0/26/P <b>M</b> /S/1870	/W/0/1712/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From	Operation				
	20:30 - 22:00 22:00 - 0:00	2.00	DRLPRC	02	P D	P		REVEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER. VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION. REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVEW OF WELLBORE, PRIOR TO SPUD.  SPUD @ 05/08/2012 20:30 DRILL CEMENT AND FLOAT EQUIPMENT 2258'- 2454'.  SURFACE CASING SHOE @ 2500'.  DRILLED WITH 15K ON BIT AND 45 RPM. @ 450 GPM.  DRILL SLIDE 2556'-2689' (133', 66'./HR)  WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT 22K.  ROTARY RPM 65. MUD MOTOR RPM 82.  STROKES PER MINUTE 115 GALLONS PER MINUTE 517.  ON/OFF PSI 1318/1062. DIFFERENTIAL 256.  TORQUE HIGH/LOW 9200/7600. OFF BOTTOM TORQUE 3400  STRING WEIGHT UP/DOWN/ROT 90/70/80. DRAG 10K.  DRILL OUT OF SHOE @ 25.04 DEGREES  HOLDING ANGLE @ 1' SOUTH AND 1' EAST OF LINE @ 2689'.  SUIDE 36' AT 80'/HR. SLIDE 7% ROTATE 93%.  RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.5 VIS 27.)  USED 8 BBLS DRILL WATER FOR HOLE VOLUME.  LOSS 20 BBLS DRILL WATER FOR HOLE VOLUME.  LOSS 20 BBLS DRILL WATER INTO FORMATION.  (LOSING 10 BBLS HR)  PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES.				

9/10/2012 11

			US	ROCK	IES RE	GION		
		Op	erat	ion St	ımma	ry Report		
Well: BONANZA 1023-6E3AS YELLOW						Spud Date: 3/18/	/2012	
Project: UTAH-UINTAH	Si	te: BONANZ	ZA 102	3-6K PAI	)	· · · · · · · · · · · · · · · · · · ·	Rig Name No: XTC 12/12, CAPSTAR 310/310	
Event: DRILLING	St	tart Date: 12	/8/201	1			End Date: 5/13/2012	
Active Datum: RKB @5,234,00usft (above I Level)	UV	VI: NE/	SW/0/10/	S/23/E/6	/0/0/26/PM/S/1870	D/W/0/1712/0/0		
Date Time Du Start-End (	nase Co	Code Sub			MD From (usff)	Operation		
			02	D	P		DRILL SLIDE 2689'-3314' (625', 113',/HR) WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT 22K. ROTARY RPM 55. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1650/1300. DIFFERENTIAL 350. TORQUE HIGH/LOW 9500/7700. OFF BOTTOM TORQUE 3900 STRING WEIGHT UP/DOWN/ROT 103/70/82. DRAG 19K. SLIDE TO HOLD APPROX 25 DEGREE @ 308 AZIMITH SLIDE 154' AT 84'/HR. SLIDE 27% ROTATE 73%. WELLBORE 34' SOUTH AND 22' EAST OF WELL PLAN. RUNNING 2 CENTRIFUGES AND DE WATERING. (WT 8.5 VIS 27.) USED 33 BBLS DRILL WATER FOR HOLE VOLUME. LOSS 72 BBLS DRILL WATER INTO FORMATION. (LOSING 12 BBLS HR) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'. (USE 90 BBLS LIGHT DRILL WATER WITH 32 VIS AS BASE FOR BUILDING SWEEPS.) NO FLARE.	
5:30 - 6:00 c	).50 DRI	LPRO (	07	Α	Р		RIG SERVICE. SERVICE TOP DRIVE. CHECK GENERATORS. SERVICE CROWN. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP.	

9/10/2012 11:38:02AM

Well: BONANZA	1023-6E3AS YELLO	W	,				Spud Date: 3/18	2012		
Project: UTAH-U	INTAH		Site: BON	IANZA 1	023-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310		
Event: DRILLING	3		Start Date	e: 12/8/20	011			End Date: 5/13/2012		
Active Datum: RI Level)	KB @5,234.00usft (at	ove Mean Se	ea	UWI: N	E/SW/0/1	0/S/23/E/6	/0/0/26/PM/S/187	0/W/0/1712/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	6:00 - 12:00 12:00 - 13:30	6.00	DRLPRO	02	D	Y		DRILL SLIDE 3314'-3855' (541',90'/HR) WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT 22K. ROTARY RPM 55. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1675/1325. DIFFERENTIAL 350. TORQUE HIGH/LOW 10000/8100. OFF BOTTOM TORQUE 4800 STRING WEIGHT UP/DOWN/ROT 105/72/85. DRAG 20K. SLIDE TO HOLD APPROX 25 DEGREE @ 308 AZIMITH SLIDE 292' AT 75'/HR. SLIDE 54% ROTATE 46%. WELLBORE 60' SOUTH AND 31' EAST OF WELL PLAN. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.5 VIS 27.) USED 29 BBLS DRILL WATER FOR HOLE VOLUME. LOSS 72 BBLS DRILL WATER INTO FORMATION. (LOSING 12 BBLS HR) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'. (USE 50 BBLS LIGHT DRILL WATER WITH 32 VIS AS BASE FOR BUILDING SWEEPS.) (USED 100 BBLS OF FRESH WATER FOR HOLE VOLUME) PROBLEMS WITH RETURNS RUNNING OVER SHAKERS INTO CATCH CAN. TO MUCH POLY IN SYSTEM. NO FLARE. RETURNS OVER RUNNING SHAKERS. UNABLE TO KEEP UP WITH FLUID FLOWING INTO CATCH CAN. PICK UP AND SLOWED PUMP DOWN. CLEANED SHAKER SCREENS AND SHUT DOWN DEWATERING SYSTEM WITH POLY. CLEARED UP PROBLEM. (PROBLEM RESULTED FROM FREE POLYMERS MIXED INTO ACTIVE SYSTEM AND POLYMERS MIXED INTO ACTIVE SYSTEM AND POLYMERS MIXED INTO ACTIVE SYSTEM AND POLYMERS MIXED FROM DEWATERING.) (RUNNING API 200 SHAKER SCREENS)		

9/10/2012 11:38:02AM 5

# **Operation Summary Report**

/ell: BONANZA	1023-6E3AS YELLC					Spud Date: 3/1	8/2012			
roject: UTAH-U	JINTAH		Site: BO	NANZA 1	023-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310		
vent: DRILLING	G		Start Dat	e: 12/8/20	011			End Date: 5/13/2012		
ctive Datum: R	KB @5,234.00usft (a	bove Mean S	Sea	UWI: N	E/SW/0/1	0/S/23/E/6	/0/0/26/PM/S/18	370/W/0/1712/0/0		
.evel)										
Date	Time	Duration	Phase	Code	Sub	P/U	MD From	Operation		
	Start-End	(hr)			Code		(usft)			
	13:30 - 15:30	2.00	DRLPRO	02	D	Р		DRILL SLIDE 3855'-4010' (155',78'/HR)		
								WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT		
								22K.		
								ROTARY RPM 55. MUD MOTOR RPM 82.		
								STROKES PER MINUTE 115. GALLONS PER MINUTE		
								517.		
								ON/OFF PSI 1700/1350. DIFFERENTIAL 350.		
								TORQUE HIGH/LOW 10000/8100. OFF BOTTOM		
								TORQUE 5200		
								STRING WEIGHT UP/DOWN/ROT 107/72/85. DRAG		
								22K.		
								SLIDE TO HOLD APPROX 25 DEGREE @ 308 AZIMITH		
								SLIDE 105' AT 70'/HR. SLIDE 68% ROTATE 32%.		
								WELLBORE 34' SOUTH AND 13' EAST OF WELL		
								PLAN.		
								RUNNING 2 CENTRIFUGES AND DE WATERING.( WT		
								8.5 VIS 27. )		
								USED 8 BBLS DRILL WATER FOR HOLE VOLUME.		
								LOSS 24 BBLS DRILL WATER INTO FORMATION.		
								(LOSING 12 BBLS HR)		
								PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO		
								HELP CONTROL LOSSES.		
								PUMP 15 BBLS SWEEP EVERY 200'. NO FLARE.		
	15:30 - 16:00	0.50	DRLPRO	07	Α	P				
		0.00	D. KEI TO	0,	•	•		SERVICE TOP DRIVE. SERVICE GENERATORS. CHECK BRAKE ADJUSTMENT AND EMERGENCY		
								STOP BUTTON.		
	16:00 - 0:00	8.00	DRLPRO	02	D	Р		DRILL SLIDE 4010'-4795' (785', 98'/HR)		
								WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT		
								23K.		
								ROTARY RPM 55. MUD MOTOR RPM 82.		
								STROKES PER MINUTE 115. GALLONS PER MINUTE		
								517.		
								ON/OFF PSI 1750/1450. DIFFERENTIAL 300.		
								TORQUE HIGH/LOW 9600/8500. OFF BOTTOM		
								TORQUE 4800		
								STRING WEIGHT UP/DOWN/ROT 130/76/94, DRAG		
								36K,		
								START DROP AT 4300'.(BEFORE DROP SLIDING 80% OF TIME)		
								SLIDE 292' AT 60'/HR. SLIDE 37% ROTATE 63%.		
								WELLBORE 31' SOUTH AND 10' EAST OF WELL		
								PLAN.		
								RUNNING 2 CENTRIFUGES AND DE WATERING.( WT		
								8.5 VIS 27. )		
								USED 43 BBLS DRILL WATER FOR HOLE VOLUME.		
								LOSS 104 BBLS DRILL WATER INTO FORMATION.		
								(LOSING 13 BBLS HR) (TRANSFERED 150 BBLS OF		
								32 VIS DRILL WATER TO SYSTEM FOR SWEEPS		
								AND HOLE VOLUME)		
								PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO		
								HELP CONTROL LOSSES.		
								PUMP 15 BBLS SWEEP EVERY 200'.		

9/10/2012

11:38:02AM

# **Operation Summary Report**

Well: BONANZA	1023-6E3	AS YELLO	W	<u></u>				Spud Date: 3/18	3/2012		
Project: UTAH-U	INTAH			Site: BON	IANZA 1	023-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310		
Event: DRILLING	i			Start Date	e: 12/8/20	011			End Date: 5/13/2012		
Active Datum: Rh Level)	(B @5,23	4.00usft (a	bove Mean S	ea	UWI: N	E/SW/0/1	0/S/23/E/	6/0/0/26/PM/S/187	870/W/0/1712/0/0		
Date	Star	ime rt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
5/10/2012	Star 0:00		1 1	DRLPRO DRLPRO DRLPRO	02 07 02		P P		DRILL SLIDE 4795'- 5444' (649', 118'/HR) WEIGHT ON BIT 18-22K. AVERAGE WEIGHT ON BIT 23K. ROTARY RPM 55. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1950/1650. DIFFERENTIAL 300. TORQUE HIGH/LOW 9900/8300. OFF BOTTOM TORQUE 5500 STRING WEIGHT UP/DOWN/ROT 159/90/111. DRAG 48K. DROPPING ANGLE FROM 12 DEGREES TO 4.31 DEGREES. SLIDE 38' AT 38'/HR. SLIDE 6% ROTATE 94%. WELLBORE 2' NORTH 1' WEST OF CENTER OF TARGET AT 5444'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.5 VIS 27.) USED 35 BBLS DRILL WATER FOR HOLE VOLUME. LOST 65 BBLS DRILL WATER INTO FORMATION. (LOSING 10 BBLS HR) (TRANSFERED 120 BBLS OF FRESH WATER FOR MAKE UP) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'. NO FLARE. RIG SERVICE. SERVICE TOP DRIVE. SERVICE CROWN. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP BUTTON. DRILL SLIDE 5444'-6173' (729',121'/HR) WEIGHT ON BIT 18-24K. AVERAGE WEIGHT ON BIT 23K. ROTARY RPM 65. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1700/1400. DIFFERENTIAL 300. TORQUE HIGH/LOW 10800/8700. OFF BOTTOM TORQUE 7500 STRING WEIGHT UP/DOWN/ROT 152/90/119. DRAG 33K. HOLE VERTICAL AT 5621'. SLIDE 36' AT 45'/HR. SLIDE 5% ROTATE 95%. WELLBORE 4' NORTH 1' WEST OF CENTER OF TARGET AT 6173'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.6 VIS 30.) DRILLING WITH PHPA SYSTME. RETURNING OVER 100 MESH SCREENS.		
									USED 40 BBLS DRILL WATER FOR HOLE VOLUME. LOST 72 BBLS DRILL WATER INTO FORMATION. (LOSING 12 BBLS HR) (TRANSFERED 50 BBLS OF DRILL WATER FOR MAKE UP) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES.		
									HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'. NO FLARE.		

9/10/2012 11:38:02AM

Vell: BONANZA 102		AS YELLOV	V		Spud Date: 3/18/2012  Site: BONANZA 1023-6K PAD Rig Name No: XTC 12/12 CAPSTAR 310/310										
roject: UTAH-UINT	ГАН			Site: BON	IANZA 10	23-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310						
vent: DRILLING			· · · · · · · · · · · · · · · · · · ·	Start Date	: 12/8/20	11			End Date: 5/13/2012 1870/W/0/1712/0/0						
ctive Datum: RKB ( evel)	@5,234	1.00usft (abo	ove Mean Se	ea	UWI: NE	E/SW/0/1	0/S/23/E/6	/0/0/26/PM/S/18							
Date	化表型 机防线管	me t-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation						
	2:00	- 17:30	5.50	DRLPRO	02	D	P	(USI)	DRILL SLIDE 6173'-6624' (451',82'/HR) WEIGHT ON BIT 18-24K. AVERAGE WEIGHT ON BIT 23K. ROTARY RPM 65. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1700/1400. DIFFERENTIAL 300. TORQUE HIGH/LOW 11200/8900. OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 175/95/125. DRAG 50K. SLIDE 28' AT 25'/HR. SLIDE 6% ROTATE 94%. WELLBORE 1' NORTH 1' EAST OF CENTER OF TARGET AT 6624'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.7 VIS 31.) DRILLING WITH PHPA SYSTEM. RETURNING OVER 100 API SCREENS. USED 25 BBLS DRILL WATER FOR HOLE VOLUME. LOST 80 BBLS DRILL WATER INTO FORMATION. (LOSING 14 BBLS HR) (TRANSFERED 135 BBLS OF DRILL WATER FOR MAKE UP) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'.						
11	7.50	- 18.00	0.50	DRLPRO	07	A	P		RIG SERVICE. SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP BUTTON.						
11	8:00	- 0;00	6.00	DRLPRO	02	D	P		DRILL SLIDE 6624'-7173' (549', 92'/HR) WEIGHT ON BIT 18-24K. AVERAGE WEIGHT ON BIT 23K. ROTARY RPM 65. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 2000/1600. DIFFERENTIAL 400. TORQUE HIGH/LOW 12100/10100. OFF BOTTOM TORQUE 8800 STRING WEIGHT UP/DOWN/ROT 202/105/133. DRAG 69K. SLIDE 40' AT 30'/HR. SLIDE 7% ROTATE 93%. WELLBORE 16' NORTH 5' EAST OF CENTER OF TARGET @ 7074'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.7 VIS 31.) DRILLING WITH PHPA SYSTEM. RETURNING OVER 100 API SCREENS. USED 30 BBLS DRILL WATER FOR HOLE VOLUME. LOST 104 BBLS DRILL WATER INTO FORMATION. (LOSING 17 BBLS HR) (TRANSFERED 75 BBLS OF FRESH FOR MAKE UP) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'.						

9/10/2012 11

Well: BONANZA	1023-6E3AS YELLO	w					Spud Date: 3/18/2012				
Project: UTAH-U	INTAH		Site: BON	IANZA 10	23-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310			
Event: DRILLING	3		Start Date	e: 12/8/20	011			End Date: 5/13/2012			
Active Datum: R _evel)	KB @5,234.00usft (ab	ea	UWI: NE/SW/0/10/S/23/E/6/0/0/26/PM/S/1870/W/0/1712/0/0								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
5/11/2012	0:00 - 5:30	5.50	DRLPRO	02	D	P		DRILL SLIDE 7173'-7713' (540', 98'/HR) WEIGHT ON BIT 18-25K. AVERAGE WEIGHT ON BIT 23K. ROTARY RPM 65. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1725/1400. DIFFERENTIAL 425. TORQUE HIGH/LOW 12200/10100. OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 217/115/132. DRAG 85K. SLIDE 40' AT 30'/HR. SLIDE 7% ROTATE 93%. WELLBORE 10' NORTH 9' EAST OF CENTER OF TARGET @ 7704'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.6 VIS 29.) DRILLING WITH PHPA SYSTEM. RETURNING OVER 100 API SCREENS. USED 30 BBLS DRILL WATER FOR HOLE VOLUME. LOST 108 BBLS DRILL WATER INTO FORMATION. (LOSING 17 BBLS HR) (TRANSFERED 125 BBLS OF FRESH FOR MAKE UP) PUMP 50 VIS GEL AND 5% SAWDUST SWEEPS TO HELP CONTROL LOSSES. PUMP 15 BBLS SWEEP EVERY 200'. NO FLARE.			
	5:30 - 6:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE. SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP			

9/10/2012 11:38:02AM

				Opera	tion S	umma	ry Report					
Well: BONANZA 102	23-6E3AS YELLOW	<b>/</b>			Spud Date: 3/18/2012							
Project: UTAH-UINT.	AH		Site: BON	ANZA 10	23-6K PA	<b>ND</b>	4.4	Rig Name No: XTC 12/12, CAPSTAR 310/310				
Event: DRILLING			Start Date	e: 12/8/20	11			End Date: 5/13/2012				
Active Datum: RKB @5,234.00usft (above Mean Sea Level)					E/SW/0/10	)/S/23/E/6	/0/0/26/PM/S/187	/W/0/1712/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
6	:00 - 12:00	6.00	DRLPRO	02	D	P		DRILL SLIDE 7713'-8181' (468',78'/HR) WEIGHT ON BIT 15-25K. AVERAGE WEIGHT ON BIT 21K. ROTARY RPM 55-60. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1725/1400. DIFFERENTIAL 325. TORQUE HIGH/LOW 13000/11100. OFF BOTTOM TORQUE 9000 STRING WEIGHT UP/DOWN/ROT 193/116/133. DRAG 60K. (STARTED REAMING CONNECTIONS) (STARTED TO REACH MAXIMUM TORQUE LIMITS) SLIDE 60' AT 30'/HR. SLIDE 12% ROTATE 88%. (LAST SLIDE FOR WELL 7956') WELLBORE 12' NORTH 4 EAST OF CENTER OF TARGET @ 8181'. RUNNING 2 CENTRIFUGES AND DE WATERING.( WT 8.6 VIS 29.) DRILLING WITH PHPA SYSTEM TO TRY TO REDUCE TORQUE. RETURNING OVER 100 API SCREENS. USED 25 BBLS DRILL WATER FOR HOLE VOLUME. LOST 60 BBLS DRILL WATER INTO FORMATION. (LOSING 10 BBLS HR) (TRANSFERED 130 BBLS OF FRESH FOR MAKE UP) PUMP 50 VIS GEL AND 10% SAWDUST SWEEPS TO HELP CONTROL TORQUE PUMP 15 BBLS SWEEP EVERY 200'. GAS FROM 7780' RESULTING IN 3' DRILLING FLARE. 8-10' CONNECTION FLARE SCF 5604				

9/10/2012

				U	S ROC	KIES RI	EGION			
				Opera	ition S	umme	ry Report			
Well: BONANZA	1023-6E3AS YELL(	wc	5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -				Spud Date: 3/18	/2012		
Project: UTAH-U	INTAH		Site: BON	IANZA 10	23-6K P	AD		Rig Name No: XTC 12/12, CAPSTAR 310/310		
Event: DRILLING	3		Start Date	e: 12/8/20	)11			End Date: 5/13/2012		
Active Datum: RI Level)	KB @5,234.00usft (a	above Mean S	ea	UWI: NE	E/SW/0/1	0/S/23/E/	3/0/0/26/PM/S/187	70/W/0/1712/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	12:00 - 17:30 17:30 - 18:00	5.50	DRLPRO	02	D	P		DRILL SLIDE 8181'-8534' (353', 64'/HR) WEIGHT ON BIT 15-25K. AVERAGE WEIGHT ON BIT 20K. ROTARY RPM 55-60. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1800/1500. DIFFERENTIAL 300. TORQUE HIGH/LOW 13000/12100. OFF BOTTOM TORQUE 11500 STRING WEIGHT UP/DOWN/ROT 208/116/145. DRAG 63K. (REAMING CONNECTIONS) (REACH MAXIMUM TORQUE LIMITS HAD TO BACK OFF WT FROM 8122'-8460 TO 15 WOB) SLIDE 0' AT 0'/HR. SLIDE 0% ROTATE 100%. (LAST SLIDE FOR WELL 7956') WELLBORE 10 NORTH 5' EAST OF CENTER OF TARGET @ 8534'. RUNNING 2 CENTRIFUGES AND DE WATERING. (WT 8.6 VIS 29.) DRILLING WITH PHPA SYSTEM TO TRY TO REDUCE TORQUE. RETURNING OVER 100 API SCREENS. USED 20 BBLS DRILL WATER FOR HOLE VOLUME. LOST 52 BBLS DRILL WATER INTO FORMATION. (LOSING 8 BBLS HR) (TRANSFERED 50 BBLS OF FRESH FOR MAKE UP) PUMP 50 VIS GEL AND 10% SAWDUST SWEEPS TO HELP CONTROL LOSSES. (MIX DRUM OF ANCO GLIDE IN SWEEPS TO HELP CONTROL TORQUE) PUMP 15 BBLS SWEEP EVERY 100'. 3' DRILLING FLARE. 8-10' CONNECTION FLARESCF 5323 RIG SERVICE. SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP		

9/10/2012 11:38:02AM

11

# **Operation Summary Report**

Well: BONANZA	1023-6E3AS YELLO	W					Spud Date: 3/1	8/2012
Project: UTAH-l	JINTAH		Site: BO	NANZA 10	023-6K P/	4D		Rig Name No: XTC 12/12, CAPSTAR 310/310
Event: DRILLIN	3		Start Date	e: 12/8/20	)11			End Date: 5/13/2012
Active Datum: R	KB @5,234.00usft (al	bove Mean S	ea	UWI: NI	E/SW/0/1	0/S/23/E/6	6/0/0/26/PM/S/18	70/W/0/1712/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02	D	P	(UST)	DRILL SLIDE 8534'-8920' (386', 64'/HR) WEIGHT ON BIT 15-27K. AVERAGE WEIGHT ON BIT 25K. ROTARY RPM 55-60. MUD MOTOR RPM 82. STROKES PER MINUTE 115. GALLONS PER MINUTE 517. ON/OFF PSI 1900/1600. DIFFERENTIAL 300. (2750 PSI AFTER MUD UP) TORQUE HIGH/LOW 13000/12600. OFF BOTTOM TORQUE 12800.) (TORQUE HIGH/LOW AFTER MUD UP 13000/ 11200. OFF BOTTOM 12300) STRING WEIGHT UP/DOWN/ROT 211/118/145. DRAG 66K. (REAMING CONNECTIONS) SLIDE 0' AT 0'/HR. SLIDE 0% ROTATE 100%. (LAST SLIDE FOR WELL 7956') WELLBORE 5' NORTH 12' EAST OF CENTER OF TARGET @ 8920'. RUNNING 2 CENTRIFUGES AND DE WATERING. (WT 8.6 VIS 29.) DRILLING WITH PHPA SYSTEM TO TRY TO REDUCE TORQUE. RETURNING OVER 100 API SCREENS. USED 21 BBLS DRILL WATER FOR HOLE VOLUME. LOST 32 BBLS DRILL WATER INTO FORMATION. (LOSING 8 BBLS HR) PUMP 50 VIS GEL AND 10% SAWDUST SWEEPS TO HELP CONTROL LOSSES. (MIX DRUM OF ANCO GLIDE IN SWEEPS TO HELP CONTROL TORQUE) PUMP 15 BBLS SWEEP EVERY 100'.  STARTED MUD UP @ 8800'. (22:00) DISPLACE IN 780 BBLS OF 11.5 MUD INTO SYSTEM AND DISPLACE 680 BBLS OF 8.6# DRILL WATER TO UPRIGHTS.) (ENDED UP WITH 10.4# MUD BY 8878'. STILL DRILLING WITH 8' FLARE. RAISE MUD WT TO 11# WHILE DRILLING ) (NO LOSSES AFTER MUD UP) 3' DRILLING FLARE. 5 HRS. 6' CONNECTION FLARE. 3746 SCF GAS FROM 8780'. 8' FLARE 1 HR 4456 SCF

9/10/2012 11:38:02AM

12

Vell: BONANZA	1023-6E3AS YELLO	DW .					Spud Date: 3/18	8/2012	
Project: UTAH-U	JINTAH		Site: BO	e: BONANZA 1023-6K PAD				Rig Name No: XTC 12/12, CAPSTAR 310/310	
vent: DRILLING	3		Start Dat	tart Date: 12/8/2011				End Date: 5/13/2012	
ctive Datum: R evel)	KB @5,234.00usft (a	bove Mean S	ea	UWI: NE/SW/0/10/S/23/E/6/0/0/26/PM/S/1870					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
5/12/2012	0:00 - 1:30 1:30 - 3:00	1.50	DRLPRO	02	D	P		DRILL 8920'-8985' (65', 43'/HR) TD 5/12/2012 01:30 WEIGHT ON BIT 15-27K. AVERAGE WEIGHT ON BIT 25K. ROTARY RPM 55-60. MUD MOTOR RPM 82. STROKES PER MINUTE 105. GALLONS PER MINUTE 472. ON/OFF PSI 2750/2500. DIFFERENTIAL 250. TORQUE HIGH/ LOW 13000/ 11200. OFF BOTTOM TORQUE 12300 STRING WEIGHT UP/DOWN/ROT 212/118/146. DRAG 66K. (REAMING CONNECTIONS) SLIDE 0' AT 0'/HR. SLIDE 0% ROTATE 100%. (LAST SLIDE FOR WELL 7956') WELLBORE 1' NORTH 15' EAST OF CENTER OF TARGET @ TD'. BY PASS CENTRIFUGES AND DEWATERING. MUD IN WT 10.6 VIS 40. MUD WT OUT 10.4 VIS 33. PUMP LCM SWEEP AROUNDTO HELP CLEAN HOLE. NO LOSSES. 3' FLARE 1.5 HR- 844 SCF CIRC AND CONDTION HOLE. CIRC BOTTOMS UP. RAISE MUD WT.	
	3:00 - 8:00	5.00	EVALPR	06	E	P		MUD IN 11.5 VIS 41. MUD OUT 11.3 VIS 38.  NO LOSSES.  MIX UP 40 BBL ANCHO GLIDE SWEEP AND PUMP.  MIX 40 BBL 13# DRY JOB AND HOLD.  NO FLOW ON FLOW CHECK.  WIPER TRIP OUT OF HOLE. PUMP AND ROTATE	
								OUT OF HOLE TO 8500'. PUMP AND ROTATE OUT OF HOLE TO 8500'. PUMP AND ROT OFF AND ON FROM 8500-7600'. (80 K OVER PULL OFF BOTTOM). PUMP DRY JOB AND TRIP OUT OF HOLE. PULL THOUGH SOME TIGHT HOLE FROM 6765'-6675' W/ 35 K OVER. WORK THOUGH TIGHT HOLE @ 4792'-4571' WITH 50K AND NO PUMP. TRIP OUT OF HOLE TO SHOE. LOSS 10 BBLS ON TRIP OUT TO SHOE. NO FLOW ON FLOW CHECKS.	
	8:00 - 9:00	1.00	EVALPR	09	Α	P		SLIP AND CUT DRILL LINE. CHECK BRAKE ADJUSTMENT. NO FLOW ON FLOW CHECK.	
	9:00 - 13:00	4.00	EVALPR	06	E	P		WPER TRIP BACK IN HOLE. WASH THROUGH BRIDGE @ 4197' AND 5812'. HOLE SLICK EXCEPT FOR BRIDGES. TRIP TO BOTTOM. LOSS 10 BBL OF MUD ON TRIP IN. 10' FILL ON BOTTOM.	
	13:00 - 13:30	0.50	EVALPR	07	Α	P		RIG SERVICE. SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP BUTTON. SERVICE GERNERATORS AND CROWN.	
	13:30 - <sub>16:00</sub>	2.50	EVALPR	05	Α	Р		CIRC AND CONDTION HOLE. CIRC BOTTOMS UP. MUD IN 11.6 VIS 43. MUD OUT 11.5 VIS 40. NO LOSSES. PUMP 2- 15% LCM SWEEPS AROUND TO HELP CLEAN HOLE. MIX 40 BBL 13# DRY JOB AND HOLD. NO FLOW ON FLOW CHECK. 15' FLARE ON BOTTOMS UP FOR 15 MIN, 4196 SCF	

9/10/2012

11:38:02AM

#### **Operation Summary Report**

Well: BONANZA	4 1023-6E3AS YELLC	DW					Spud Date: 3/18	3/2012
Project: UTAH-l	JINTAH		Site: BON	NANZA 1023-6K PAD				Rig Name No: XTC 12/12, CAPSTAR 310/310
Event: DRILLIN	G		Start Date	e: 12/8/20	)11			End Date: 5/13/2012
Active Datum: F Level)	RKB @5,234.00usft (a	bove Mean S	ea	UWI: NI	E/SW/0/1	0/S/23/E/6	/0/0/26/PM/S/187	70/W/0/1712/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/13/2012	16:00 - 0:00 0:00 - 5:00	8.00 5.00	EVALPR	11	B	P	(daily)	PUMP AND ROT OUT OF HOLE TO 8000'. 60K OVER PULL PULLING OFF BOTTOM. HOLE RELATIVELY SLICK. PULL TO 7500' WET. PIPE PULLING GOOD. NO FLOW ON FLOW CHECK. PUMP DRY JOB. PULL OUT OF HOLE FOR LOGS. HOLE TAKING PROPER FLUID. NO FLOW ON FLOW CHECKS. (WORK THROUGH TIGHT SPOT 4571') HOLE SLICK OTHER THEN TIGHT SPOT @ 4571'. PULL ROTATING HEAD RUBBER AT HEAVY WEIGHT DRILL PIPE. LAY DOWN DIRECTIONAL TOOLS. BREAK BIT AND LAYDOWN MUD MOTOR. PULL WEAR BUSHING. HOLD SAFETY MEETING WITH HALLIBURTON LOGGING CREW. RIG UP LOGGERS AND PICK UP TRIPLE COMBO LOGGING TOOLS. RUN IN HOLE AND LOGGED DOWN WITH TOOLS AND BRIDGE OUT AT 4372'. TRY TO TO WORK THOUGH BRIDGE AND ENDED UP STICKING TOOL. WORK TOOL FREE. THEN BECAME STUCK UP HOLE @ 4293'. WORK TOOL FREE FROM 4293'. PULLED OUT TOOLS AND RIGGED DOWN HALLIBURTON. (CLEAN PITS WITH JET HOSE AND CLEANED SOLIDS OUT OF MUD WITH SHAKERS.)(NO VAC TRUCK)
	5:00 - 5:30	0.50	CSGPRO	07	Α	P		RIG SERVICE. SERVICE TOP DRIVE. CHECK BRAKE ADJUSTMENT AND TEST EMERGENCY STOP BUTTON. SERVICE GERNERATORS AND CROWN.
	5:30 - 6:00	0.50	CSGPRO	12	Α	Р		HOLD SAFETY MEETING WITH KIMZEY CASING CREW. RIG UP CASING CREW. CHECK FLOAT EQUIPMENT. REMOVE RIG ELEVATORS. RIG UP INTERGRATED TONGES.

9/10/2012 11:38:02AM

Well: BONANZA	1023-6E3AS YELLC	W					Vell: BONANZA 1023-6E3AS YELLOW Spud Date: 3/18/2012								
Project: UTAH-U	JINTAH		Site: BON	NANZA 10	023-6K P/	AD.		Rig Name No: XTC 12/12, CAPSTAR 310/310							
vent: DRILLING	3		Start Date	e: 12/8/20	011			End Date: 5/13/2012							
ctive Datum: R evel)	KB @5,234.00usft (a	bove Mean S	ea	UWI: NI	JWI: NE/SW/0/10/S/23/E/6/0/0/26/PM/S/187			70/W/0/1712/0/0							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation							
	6:00 - 13:00	7.00	CSGPRO	12	С	Р		MAKE UP 4.5" K-55 LTC WEATHERFORD FLOAT SHOE ON SHOE SHOE JT WITH THREAD LOCK. MAKE UP 4.5" K-55 FLOAT COLLAR W/ THREAD LOCK ON TOP OF SHOE JT.							
								RUN CENTRALIZERS ON FIRST 3 JTS AND EVERY THIRD JT FOR TOTAL OF 15 CENTRALIZERS. BREAK CIRCULATION @ 844'. NO PROBLEMS WITH FLOAT SHOE OR COLLAR.							
								RUN A TOTAL OF 93 JTS OF 4.5" 11.6# I-80 LTC CASING (3942.3'). MAKE UP DQX CROSS OVER JT AND RIG UP TORQUE TURN. PERFORM DUMP TEST.							
								RUN A TOTAL 114 JTS OF 4.5" 11.6# I-80 DQX CSG WITH TORQUE TURN (5017"). ( TSI HAND WITNESSING CSG JOB). WASH THROUGH BRIDGE @ 4372'-4380'.							
								1 BAD DQX JT DELIVERED TO LOCATION FILLED CASING AND CIRCULATED AT 844' AND 4100'. GOOD CIRCULATION WITH NO LOSSES WAS ESTABLISHED.							
								LANDED CASING ON CAMERON SLOTTED MANDREL.							
								TOTAL OF 93 JTS OF 4.5" 11.6# I-80 LTC (3942.3") TOTAL 114 JTS OF 4.5" 11.6# I-80 DQX CSG (5017")							
								LAND FLOAT SHOE @ 8974.7 KB LAND TOP OF FLOAT COLLAR @ 8929.8' KB. LAND TOP OF MESA MARKER JT @ 6758.1 KB. LAND TOP DQX TO LTC CROSS OVER JT @ 5011.1' KB.							
	13:00 - 14:00	1.00	CSGPRO	05	D	Р		CIRCULATE DOWN CASING WITH RIG. GOOD CIRCULATION WITH NO LOSSES @ 363 GALLONS PER MINUTE. 15' FLARE FOR 15 MIN ON BOTTOMS UP 4196 SCF. MUD WT 11.5 VIS 42. RIG DOWN KIMZEY CASING.							
	14:00 - 15:00	1.00	MAINT	22	L	Z		WAIT FOR BAKER HUGHES TO TROUBLE SHOOT ENGINE PROBLEM ON PUMP TRUCK. (1 ENGINE WAS UNABLE TO THROTTLE UP.) CONTINUE TO CIRCULATE WITH NO LOSSES. HOLD SAFETY MEETING WITH BAKER HUGHES CEMENTERS AND RIG UP.							

9/10/2012 11:38:02AM

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			Opera	tion S	iumma	ary Report	
Well: BONANZA 1023-6E3AS YELLOW		CO. Akria				Spud Date: 3/18	8/2012
Project: UTAH-UINTAH		Site: BON	ONANZA 1023-6K PAD				Rig Name No: XTC 12/12, CAPSTAR 310/310
Event: DRILLING Start Da Active Datum: RKB @5,234.00usft (above Mean Sea Level)			: 12/8/20	11			End Date: 5/13/2012
			UWI: NE/SW/0/10/S/23/E/6/0/0/26/PM/S/1870/W/0/1712/0/0				
	ration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1.00	CSGPRO	12	E	P		RIG UP CEMENT HEAD WITH TOP PLUG INSTALLED. PRESSURE TEST LINES TO 5000 PSI. PUMP 25 BBLS OF FRESH WATER. PUMP 164.83 BBLS (410 SX) OF 12.0# 2.26 YIELD 12.48 GAL/SK OF LEAD CEMENT. PUMP 253.05 BBLS (1085SX) OF 14.3# 1.31 YIELD 5.91 GAL/SK POZ 50/50 TAIL CEMENT. SHUT DOWN AND FLUSH LINES. DROP TOP PLUG DISPLACE WITH 138.7 BBLS OF FRESH WATER TREATED WITH CLAYFIX AND MAGNACIDE. FULL RETURNS THROUGH OUT JOB.NO CEMENT OR SPACER TO SURFACE LIFT PSI OF 2800 @ 3 BBLS MINUTE. BUMP PLUG 3450 PSI. PRESSURE HELD 5 MINUTES. FLOAT HELD. FLOW BACK 1.5 BBLS. ESTIMATED TOP OF CEMENT FOR LEAD 450'. ESTIMATED TOP OF CEMENT FOR TAIL 3300'. STORED 790 BBLS OF 11.5# MUD. RIG DOWN CEMENTERS. FLUSH STACK WITH FRESH WATER. UNSCREW LANDING JT. RUN IN WITH PACK OFF. TURN IN LANDING DOGS. UNSCREW FROM PACK OFF. LAYDOWN LANDING JT. UNDO FLOW LINE. NIPPLE DOWN BOPE. UNDO CHOKE LINE. P/U STACK. AND COVER WELL. RELEASE RIG 5/13/2012 19:00.

### 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION	
Representative		
Address		

### 1.2 Well/Wellbore Information

Well	BONANZA 1023-6E3AS YELLOW	Wellbore No.	ОН		
Well Name	BONANZA 1023-6E3AS	Wellbore Name	BONANZA 1023-6E3AS		
Report No.	1	Report Date	8/9/2012		
Project	UTAH-UINTAH	Site	BONANZA 1023-6K PAD		
Rig Name/No.		Event	COMPLETION		
Start Date	8/9/2012	End Date	8/27/2012		
Spud Date	3/18/2012	Active Datum	RKB @5,234,00usft (above Mean Sea Level)		
UWI	NE/SW/0/10/S/23/E/6/0/0/26/PM/S/1870/W/0/1712/0	/0			

### 1.3 General

Contractor	Job Method	Supervisor	
Perforated Assembly	Conveyed Method		

### 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

Gross interval	6,161.0 (usft)-8,797.0	) (usft	Start Date/Time	8/9/2012	12:00AM	
No. of Intervals		41	End Date/Time	8/9/2012	12:00AM	
Total Shots		192	Net Perforation Interval		50.00	(usft)
Avg Shot Density	3.84 (sl	hot/ft)	Final Surface Pressure			
			Final Press Date			•

# 2 Intervals

### 2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T MD Top S (usft) (usft)	金を引き set <b>f</b> を流 4		Misfires/ Diamete Carr T Add. Shot r (in)	ype /Stage No Carr Phasing Size (°)	Charge Desc /Charge Charge Reason Misrun Manufacturer Weight (gram)
8/9/2012	WASATCH/		6,161.0	6,163.0	4.00	0.360 EXP/	3.375 90.00	23.00 PRODUCTIO
12:00AM	'							N N

 September 10, 2012 at 11:40 am
 1
 OpenWells

# 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T	MD Top (usft)	MD Base (usft)	Shot Density	Misfires/ D	iamete r	Carr Type /Stage No	Carr Size	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight	Reason	Misrun
8/9/2012	WASATCH/		(usft)	6,183.0	6,185.0	(shot/ft) 4.00		(in)   0.360	EXP/	(in) 3.375	90.00		(gram) 23.0	D PRODUCTIO	Mark Civi
12:00AM														N	
8/9/2012 12:00AM	WASATCH/			6,225.0	6,227.0	4.00		0.360	EXP/	3.375	90.00		23.0	O PRODUCTIO N	
8/9/2012 12:00AM	WASATCH/			6,571.0	6,572.0	4.00		0.360 [	EXP/	3.375	90.00		23.0	O PRODUCTIO N	
8/9/2012 12:00AM	WASATCH/			6,599.0	6,602.0	4.00		0.360	EXP/	3.375	90.00		23.0	O PRODUCTIO N	
8/9/2012 12:00AM	WASATCH/			6,629.0	6,631.0	4.00		0.360	EXP/	3.375	90.00		23.0	D PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/	" "		7,460.0	7,461.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,546.0	7,547.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/		100 A PA P	7,652.0	7,653.0	4.00		0.360	EXP/	3,375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,677.0	7,678.0	4.00	100 mg	0.360 E	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,690.0	7,692.0	4.00		0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/		:	7,757.0	7,758.0	4.00		0.360 E	EXP/	3.375	90.00	-	23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,839.0	7,840.0	4.00	Mar. 1	0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,894.0	7,895.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,908.0	7,909.0	4.00		0.360 E	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			7,922.0	7,923.0	4.00		0.360 E	XP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/		, <del></del>	7,939.0	7,940.0	4.00		0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,003.0	8,004.0	3.00		0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,021.0	8,022.0	3.00	:	0.360 E	XP/	3.375	120.00	-	23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,039.0	8,040.0	3.00		0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO N	
- 1 1 - 1 1	MESAVERDE/			8,065.0	8,066.0	3.00		0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,101.0	8,103.0	3.00		0.360 E	XP/	3.375	120.00		23.00	PRODUCTIO N	

### 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T	MD Top (usft)	MD Base (usft)	Shot Density	Misfires/ Add. Shot	Diamete r	Carr Type /Stage No	Carr Size	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight	Reason	Misrun
		(40.0)	(usft)			(shot/ft)		(in)		(in)	``		(gram)		
8/9/2012 12:00AM	MESAVERDE/			8,124.0	8,125.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,135.0	8,136.0	3.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,189.0	8,190.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,220.0	8,221.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,235.0	8,236.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,254.0	8,255.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,289.0	8,290.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	:
8/9/2012 12:00AM	MESAVERDE/			8,332.0	8,333.0	4.00	V	0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,402.0	8,403.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,431.0	8,432.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/	1941 A 1944 A		8,441.0	8,442.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,460.0	8,461.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,499.0	8,501.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	,
8/9/2012 12:00AM	MESAVERDE/		-	8,543.0	8,544.0	4.00	- 10111 100	0.360	EXP/	3.375	90.00			PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,553.0	8,554.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
8/9/2012 12:00AM	MESAVERDE/			8,569.0	8,570.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
	MESAVERDE/			8,581.0	8,582.0	4.00		0.360	EXP/	3.375	90.00	· · · · · · · · · · · · · · · · · · ·	23.00	PRODUCTIO N	
	MESAVERDE/			8,720.0	8,721.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	· · · · · · · · · · · · · · · · · · ·
8/9/2012 12:00AM	MESAVERDE/			8,796.0	8,797.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	

# 3 Plots

					Opera	tion S	ummar	y Report
Well: BONANZA	1023-6E	3AS YELLO	w	a Charlette		<u> </u>		Spud Date: 3/18/2012
Project: UTAH-UI	NTAH			Site: BON	IANZA 10	23-6K P/	AD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLET	TION			Start Date	e: 8/9/201	2		End Date: 8/27/2012
Active Datum: Rh Level)	(B @5,2	34.00usft (al	bove Mean Se	a	UWI: NE	JSW/0/1	0/S/23/E/6/	0/0/26/PM/S/1870/W/0/1712/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
3/18/2012		-	1		<u> </u>	L		
8/9/2012	12:00	- 14:00	2.00	СОМР	33	С	P	FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 13 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 37 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 138 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 44 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.
8/10/2012	7:00	- 10:00	3.00	COMP	37	С	Р	SWIFW PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW
8/15/2012	7:00	- 7:15	0.25	FRAC	48		P	JSA-SAFETY MEETING

Well: BONANZA	1023-6E3AS YELLO	ow .					Spud Date: 3/1	8/2012		
Project: UTAH-UII	NTAH		Site: BON	IANZA 10	023-6K P/	AD	· · · · · · · · · · · · · · · · · · ·	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3		
Event: COMPLET	ION		Start Date	: 8/9/201	12			End Date: 8/27/2012		
Active Datum: RK Level)	(B @5,234.00usft (a	bove Mean Sea	a	UWI: NE/SW/0/10/S		0/S/23/E/	/6/0/0/26/PM/S/18	D/W/0/1712/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	7:15 - 17:00	9.75	FRAC	36	E	Р		FRAC STG 1) WHP = 1619 PSI, BRK 5100 PSI @ 9.5 BPM. ISIP 2678 PSI, FG = 0.74. CALC PERFS OPEN @ 50.9 BPM @ 4426 PSI = 98% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2403 PSI, FG = 0.71, NPI = - 275 PSI. MP 5248 PSI, MR 50.9 BPM, AP 4532 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.		
								PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8531' P/U PERF AS PER DESIGN. POOH, X-OVER FOR FRAC CREW.		
								FRAC STG 2) WHP = 2119 PSI, BRK 2643 PSI @ 9.7 BPM. ISIP 2195 PSI, FG = 0.69. CALC PERFS OPEN @ 51 BPM @ 4191 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2535 PSI, FG = 0.73, NPI = 340 PSI. MP 4460 PSI, MR 51 BPM, AP 4193 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.		
								PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8363' P/U PERF AS PER DESIGN. POOH, X-OVER FOR FRAC CREW.		
								FRAC STG 3) WHP = 680 PSI, BRK 3938 PSI @ 4.7 BPM. ISIP = 2768 PSI, FG = 0.77.  CALC PERFS OPEN @ 50.9 BPM @ 4750 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN)  ISIP 2612 PSI, FG = 0.75, NPI = - 156 PSI. MP 7129 PSI, MR 51 BPM, AP 4622 PSI, AR 50.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.		
								PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8166' P/U PERF AS PER DESIGN. POOH, SWIFN.		
								FRAC STG 4) WHP = 2114 PSI, BRK 2715 PSI @ 4.8 BPM. ISIP 2329 PSI, FG = 0.72. CALC PERFS OPEN @ 51 BPM @ 4147 PSI = 96% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2652 PSI, FG = 0.76, NPI = 323 PSI. MP 5209 PSI, MR 51 BPM, AP 4170 PSI, AR 50.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.		

				ູ່ປ	SROC	KIES R	EGION			
				Opera	rtion (	Summa	ıry Report			
Well: BONANZA 1	023-6E3AS YELLO	W					Spud Date: 3/18	8/2012		
Project: UTAH-UIN	NTAH		Site: BOI	NANZA 10	023-6K F	PAD		Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3		
Event: COMPLETI	ON		Start Dat	e: 8/9/201	12			End Date: 8/27/2012		
Active Datum: RKI Level)	B @5,234.00usft (ab	oove Mean Se	ea	UWI: NI	E/SW/0/1	10/S/23/E/	6/0/0/26/PM/S/187	70/N/0/1712/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
								23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7970' P/U PERF AS PER DESIGN. POOH, X-OVER FOR FRAC CREW.  FRAC STG 5) WHP = 835 PSI, BRK 4910 PSI @ 8.3 BPM. ISIP = 1913 PSI, FG = 0.68.  CALC PERFS OPEN @ 51.2 BPM @ 3430 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 1923 PSI, FG = 0.68, NPI = 10 PSI.  MP 6937 PSI, MR 51.3 BPM, AP 3365 PSI, AR 51 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.		
								PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7722' P/U PERF AS PER DESIGN. POOH, SWIFN.		

9/10/2012

						KIES RE	EGION I <b>ry Report</b>	
Well: BONANZA	1023-6E3AS YELLO\	N		Opera		Julilia	Spud Date: 3/18	/2012
Project: UTAH-U		· · · · · · · · · · · · · · · · · · ·	Site: BON	IANZA 10	)23-6K P	AD	Opud Date: 0/10	Rig Name No: ROCKY MOUNTAIN WELL SERVICE
Event: COMPLE	TION		Start Date	e: 8/9/201	2			3/3 End Date: 8/27/2012
Active Datum: Ri Level)	KB @5,234.00usft (ab	ove Mean Sea		T		0/S/23/E/6	6/0/0/26/PM/S/187	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/16/2012	7:00 - 15:00 7:00 - 7:15	0.25	DRLOUT	36	E	P		FRAC STG 6) WHP = 1117 PSI, BRK 3937 PSI @ 4.8 BPM. ISIP = 2303 PSI, FG = 0.75. CALC PERFS OPEN @ 50.9 BPM @ 3756 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 2211 PSI, FG = 0.72, NPI = - 92 PSI. MP 5133 PSI, MR 51.1 BPM, AP 3886 PSI, AR 50.9 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.  PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6661' P/U PERF AS PER DESIGN. POOH, X-OVER FOR FRAC CREW  FRAC STG 7) WHP = 98 PSI, BRK 2104 PSI @ 3.8 BPM. ISIP 1050 PSI, FG = 0.59. CALC PERFS OPEN @ 50.7 BPM @ 3930 PSI = 71% HOLES OPEN. (17/24 HOLES OPEN) ISIP 2458 PSI, FG = 0.81, NPI = 1408 PSI. MP 6100 PSI, MR 51.1 BPM, AP 3904 PSI, AR 50.9 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.  PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6257' P/U PERF AS PER DESIGN. POOH, X-OVER FOR FRAC CREW.  FRAC STG 8) WHP = 755 PSI, BRK 2200 PSI @ 4.8 BPM. ISIP = 1238 PSI, FG = 0.62. CALC PERFS OPEN @ 52.6 BPM @ 3930 PSI = % HOLES OPEN. (24/24 HOLES OPEN) ISIP 1431 PSI, FG = 0.66, NPI = 193 PSI. MP 4817 PSI, MR 52.6 BPM, AP 3060 PSI, AR 51.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, X-OVER FOR WL.  KILL PLUG ) RIH W/ HALLIBURTON 8K CBP, SET CBP @ 6111', R/D WIRELINE AND FRAC CREW, WELL SHUT IN,  TOTAL WATER = 8647 BBLS TOTAL SAND = 186,000# HSM-JSA
8/27/2012	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA

9/10/2012 11:41:40AM

Well: BONANZA 1023-6E3AS YELLOW					Spud	Date: 3/18	3/2012
Project: UTAH-UINTAH	Site: BON	VANZA 10	23-6K P	AD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Dat	e: 8/9/201	2				End Date: 8/27/2012
Active Datum: RKB @5,234.00usft (above Mean Sea	ı	UWI: NE	E/SW/0/1	0/S/23/E/	6/0/0/26	S/PM/S/187	70/W/0/1712/0/0
Level)		1 2 77 57		2010 - Sec. 120	Towns to a	1.000	
Date Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U	- Park 1970	O From (usft)	Operation
7:15 - 17:00 9.75	DRLOUT	44	С	P			NDWH, NUBOP, PU 3 7/8" BIT,POBS, XN SN RIH W/ 193 JTS 2 3/8" L-80 OFF FLOAT TAG FILL @ 6,086', RU PWR SWIVEL, BRK CIRC, PRESS TEST BOP TO 3,000 PSI, LOST 0 PSI IN 15 MIN.
							C/O 25' SAND TAG PLUG #1 @ 6,111', DRL HAL 8K CBP IN 5 MIN, 0 PSI INC, FCP 0 PSI, RIH TAG FILL @ 6,227'.
							C/O 30' SAND TAG PLUG #2 @ 6,257', DRL HAL 8K CBP IN 4 MIN, 0 PSI INC, FCP 0 PSI, RIH TAG FILL @ 6,606'.
							C/O 30' SAND TAG PLUG #3 @ 6,661', DRL HAL 8K CBP IN 6 MIN, 300 PSI INC, FCP 200 PSI, RIH TAG FILL @ 7,692'.
							C/O 30' SAND TAG PLUG #4 @ 7,722', DRL HAL 8K CBP IN 5 MIN, 50 PSI INC, FCP 250 PSI, RIH TAG FILL @ 7,945'.
							C/O 25' SAND TAG PLUG #5 @ 7,970, DRL HAL 8K CBP IN 5 MIN, 200 PSI INC, FCP 350 PSI, RIH TAG FILL @ 8,136'.
							C/O 30' SAND TAG PLUG #6 @ 8,166', DRL HAL 8K CBP IN 6 MIN, 100 PSI INC, FCP 400 PSI, RIH TAG FILL @ 8,333'.
							C/O 30' SAND TAG PLUG #7 @ 8,363', DRL HAL 8K CBP IN 6 MIN, 0 PSI INC, FCP 400 PSI, RIH TAG FILL @ 8,511'.
							C/O 20' SAND TAG PLUG #8 @ 8,531', DRL HAL 8K CBP IN 4 MIN, 50 PSI INC, FCP 400 PSI, RIH TAG FILL @ 8,874' (77' BELOW BTM PERF), CIRC WELL CLEAN, RD PWR SWIVEL, POOH LD 16 JTS TBG ON FLOAT, LAND TBG W/ 264 JTS 2 3/8" L-80 EOT @ 8,377.76', RD FLOOR & TBG EQUIP, NDBOP, NUWH, DROP BALL POBS @ 1,600 PSI, PRESS TEST LINES TO HAL 9,000 TO 3,500 PSI, LET BIT FALL 30 MIN TURN OVER TO FBC, SITP 250 PSI, SICP 1,900 PSI, RDMO, SDFN.
							KB-15' HANGER83' 264 JTS 2 3/8" L-80-8,359.73' POBS W/ XN SN-2.20' EOT @ 8,377.76'
							TWTR=8,924 BBLS TWR=2,096 BBLS TWLTR=6,828 BBLS

9/10/2012 11:41:40AM

				Operation	Summary Report
Well: BONANZA	A 1023-6E	3AS YELLO	w		Spud Date: 3/18/2012
Project: UTAH-L	/ - # 12			Site: BONANZA 1023-6K	PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLE	ETION			Start Date: 8/9/2012	End Date: 8/27/2012
Active Datum: F Level)	RKB @5,2	34.00usft (a	oove Mean Sea	UWI: NE/SW/0	/10/S/23/E/6/0/0/26/PM/S/1870/W/0/1712/0/0
Date	Walter Broken		4 7 7 7 7 7 7 7 7 1 1 1 1 1 1 1 1 1 1 1	Phase Code Sub	P/U MD From Operation (usft)
	17:00	- 17:00	0.00 D	RLOUT 50	WELL TURNED TO SALES @ 1700 HR ON 8/27/2012. 2200 MCFD, 1920 BWPD, FCP 1980#, FTP 1760#, 20/64" CK.
8/28/2012		-			
8/29/2012	7:00	-		50	WELL IP'D ON 8/29/12 - 1969 MCFD, 0 BWPD, 0 BOPD, CP 1997#, FTP 1500#, LP 164#, 24 HRS, CK 20/64

9/10/2012 11:41:40AM

Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH BONANZA 1023-6K PAD Well: BONANZA 1023-6E3AS

Wellbore: BONANZA 1023-6E3AS

Section: SHL

+N/-S

0.00

Design: BONANZA 1023-6E3AS (wp01)

Latitude: 39.975840 Longitude: -109.372024

+E/-W

0.00

GL: 5219.00 KB: 15' RKB + 5219' GL @ 5234.00ft (Xtreme 12)

#### FORMATION TOP DETAILS

4274.00 4874.00 6453.00 8639.00 MDPath 4604.53 5215.85 6795.08 8981.13

Formation WASATCH top of cylinder MESAVERDE

1	WELL DETAILS: BON	ANZA 1023-6E3	AS	
Northing 14521410.51	Ground Level: Easting 2096516.34	5219.00 Latittude 39.975840	Longitude -109.372024	Slot

TVD	MD	Name	Size
2375.89	2509.74	8-5/8"	8-5/8

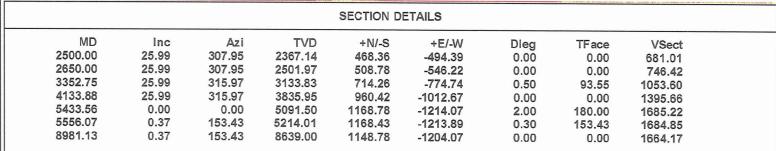


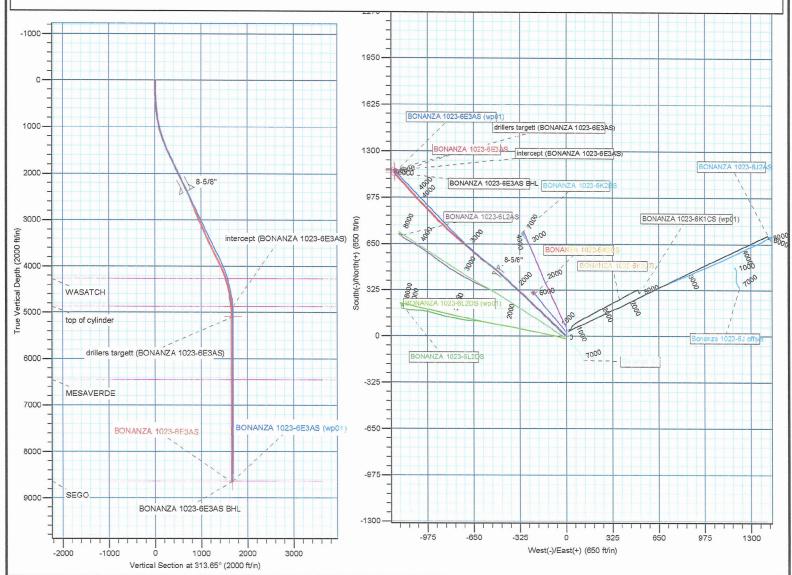
Azimuths to True North Magnetic North: 10.91°

Magnetic Field Strength: 52249.3snT Dip Angle: 65.85° Date: 4/12/2012 Model: IGRF2010

DESIGN	TARGET	DETAILS

Name intercept (BONANZA 1023-6E3AS) drillers targett (BONANZA 1023-6E3AS) BONANZA 1023-6E3AS BHL	TVD 4874.00 5091.50 8639.00	+N/-S 1162.83 1168.78 1148.78	+E/-W -1208.32 -1214.07 -1204.07	Northing 14522551.09 14522556.93 14522537.11	Easting 2095286.99 2095281.14 2095291.51	Latitude 39.979033 39.979049 39.978994	Longitude -109.376336 -109.376357 -109.376321	Point Circle (Radius: 15.00)
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# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_BONANZA 1023-6K PAD BONANZA 1023-6E3AS

**BONANZA 1023-6E3AS** 

Design: BONANZA 1023-6E3AS

# **Standard Survey Report**

05 July, 2012

Survey Report

**TVD Reference:** 

MD Reference:

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_BONANZA 1023-6K PAD

Well: Wellbore: BONANZA 1023-6E3AS BONANZA 1023-6E3AS

Design:

BONANZA 1023-6E3AS

Local Co-ordinate Reference:

Well BONANZA 1023-6E3AS

15' RKB + 5219' GL @ 5234,00ft (Xtreme 12) 15' RKB + 5219' GL @ 5234.00ft (Xtreme 12)

North Reference:

Survey Calculation Method:

Database:

True Minimum Curvature edmp

Project

UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

Map Zone:

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

UINTAH\_BONANZA 1023-6K PAD

Site Position: From:

Lat/Long

Northing: Easting:

14,521,392.52 usft 2,096,508.54 usft Latitude: Longitude: 39.975791

**Position Uncertainty:** 

0.00 ft

Slot Radius:

13-3/16 "

Grid Convergence:

-109.372053 1.05 °

Well Well Position BONANZA 1023-6E3AS

+N/-S +E/-W

0.00 ft

Northing: Easting:

14,521,410.51 usft 2,096,516.34 usft

Latitude: Longitude:

39.975840 -109.372024

**Position Uncertainty** 

0.00 ft

Wellhead Elevation:

ft

Ground Level:

5,219.00 ft

Wellbore

BONANZA 1023-6E3AS

Magnetics

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

**IGRF2010** 

4/12/2012

6.00

10.91

65.85

52,249

Design

BONANZA 1023-6E3AS

**Audit Notes:** Version:

1.0

Phase:

(ft)

**ACTUAL** 

Tie On Depth:

0.00

6.00

Vertical Section:

Depth From (TVD)

+N/-S (ft)

+E/-W (ft)

Direction (°)

314.02

Survey Program

7/5/2012

From (ft)

То (ft)

Survey (Wellbore)

**Tool Name** 

Description

236.00 2.625.00 2,500.00 Survey #1 (BONANZA 1023-6E3AS) 8,985.00 Survey #2 (BONANZA 1023-6E3AS) MWD MWD

0.00

MWD - STANDARD MWD - STANDARD

Measured Depth (ft)	Inclination (°)	Azimuth	Vertical Depth (ft)	+N/-S	+E/-W	Vertical Section	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate
		(°)		(ft)	<b>(ft)</b>	(ft)	( 7 loousit)	( / 100usit)	(°/100usft)
6.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00
236.00	0.26	276.62	236.00	0.06	-0.52	0.41	0.11	0.11	0.00
327.00	2.29	313.97	326.97	1.35	-2.03	2.40	2.30	2.23	41.04
417.00	2.99	317.92	416.88	4.34	-4.90	6.54	0.80	0.78	4.39
511.00	4.69	318.09	510.66	9.02	-9.11	12.82	1.81	1.81	0.18
605.00	6.42	318.63	604.22	15.82	-15.15	21.89	1.84	1.84	0.57
699.00	7.47	310.37	697.53	23,72	-23.28	33.23	1.54	1.12	-8.79
793.00	9.15	314.85	790.54	32.95	-33.23	46.80	1.91	1.79	4.77
888.00	10.73	315.02	884.11	44.54	-44.84	63.19	1.66	1.66	0.18
981.00	12.75	316.08	975.16	58.05	-58.08	82.11	2.18	2.17	1.14

Survey Report

Company:

US ROCKIES REGION PLANNING

Project: Site:

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_BONANZA 1023-6K PAD

Well: Wellbore: BONANZA 1023-6E3AS BONANZA 1023-6E3AS

Design:

BONANZA 1023-6E3AS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well BONANZA 1023-6E3AS

15' RKB + 5219' GL @ 5234,00ft (Xtreme 12)

15' RKB + 5219' GL @ 5234.00ft (Xtreme 12) True

Minimum Curvature

edmp

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Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	inclination	Azimuth	Depth (ft)	+N/-S	+E/-W	Section	Rate	Rate	Rate
60	(7)	(P)	(10)	(ft)	(ft)	(m)	(°/100 usft)	(°/100usft)	(°/100usft)
1,074.00	15.18	313.56	1,065.41	73.84	-74.03	104.54	2.69	2.61	-2.71
1,167.00	17.30	312.41	1,154,69	91.56	-93.06	130.54	2.31	2.28	-1.24
1,261.00	19.11	313.17	1,243.98	111.51	-114.60	159.90	1.94	1.93	0.81
1,355.00	20.75	315.02	1,332.35	133.82	-137.60	191.94	1.87	1.74	1.97
1,451.00	22.51	314.41	1,421.59	158.71	-162.75	227.32	1.85	1.83	-0.64
1,545.00	25.15	312.48	1,507.57	184.80	-190.34	265.29	2.93	2.81	-2.05
1,641.00	25,94	311.77	1,594,18	212.56	-221.04	306.66	0.88	0.82	-0.74
1,736.00	26.73	316.78	1,679.33	241.98	-251.18	348.77	2.48	0.83	5.27
1,832.00	26.38	314.41	1,765.21	272.63	-281.20	391.66	1.16	-0.36	-2.47
1,925.00	24.36	309.66	1,849.24	299.34	-310.73	431.46	3.08	-0.36 -2.17	-2.47 -5.11
2 222 22	04.07	044.05	4 005 57	205.27					
2,020.00	24.97	311.25	1,935.57	325.07	-340.89	471.02	0.95	0.64	1.67
2,114.00	25.76	316.61	2,020.52	353.00	-369.84	511.25	2.58	0.84	5.70
2,208.00	26.91	313.62	2,104.77	382.52	-399.27	552.93	1.87	1.22	-3.18
2,303.00	25.94	311.25	2,189.85	411.05	-430.46	595.18	1.51	-1.02	-2.49
2,398.00	25.76	314.23	2,275.34	439.15	-460.88	636.58	1.38	-0.19	3.14
2,500.00	25.99	307.95	2,367.14	468.36	-494.39	680.98	2.70	0.23	-6.16
TIE ON POI	NT								
2,625.00	25.04	307.14	2,479.94	501.18	-537.07	734.48	0.81	-0.76	-0.65
2,716.00	23.20	306.91	2,562.99	523.57	-566.76	771.39	2.02	-2.02	-0.25
2,807.00	20.38	309.25	2,647.49	544.36	-593.37	804.97	3.24	-3.10	2.57
2,897.00	20.00	310.44	2,731.96	564.26	-617,22	835.95	0.62	-0.42	1.32
2,988.00	21.44	311.82	2,817.07	585.45	-641.46	868.10	1.67	1.58	1.52
3,079.00	23.50	310.94	2,901.16	608.43	-667.56	902.84	2.29	2.26	-0.97
3,170.00	25.44	311.57	2,983.98	633.29	-695.89	940.49	2.15	2.13	0.69
3,260.00	24.31	310.57	3,065.63	658.16	-724.43	978.30	1.34	-1.26	-1.11
3,351.00	22.69	308.82	3,149.08	681.35	-752.33	1,014.48	1.94	-1.78	-1.92
3,442.00	23.81	310.94	3,232.69	704.39	-779.88	1,050.30	1.54	1.23	2.33
3,533.00	25.06	311.82	3,315.54	729.28	-808.12	1,087.90	1.43	1.37	0.97
3,624.00	25.19	313.07	3,397.93	755.35	-836.63	1,126.52	0.60	0.14	1.37
3,714.00	26.69	313,44	3,478.86	782,33	-865,30	1,165.89	1.68	1.67	0.41
3,805.00	25.75	314.94	3,560.49	810.35	-894.13	1,206.09	1.26	-1.03	1.65
3,896.00	26.69	316,19	3,642.13	839.06	-922.27	1,246.28	1.20	4.09	4 97
3,987.00	25.81	316.19	3,723.74	868.08	-922.27 -950.17			1.03	1.37
4,077.00	25.69	316.94	3,723.74 3,804.81	896.44	-950.17 -977.08	1,286.50 1,325.56	0.97	-0.97	-0.13
4,168.00	24.25	312.57	3,887.31	923.50	-1,004.31	1,363.94	0.44 2.57	-0.13 -1.58	0.97
4,168.00	25.94	316.94	3,969.72	950.69	-1,004.31 -1,031.67	1,363.94	2.57 2.76	1.86	-4.80 4.80
			·		·	,			
4,350.00	26.38	319.69	4,051.40	980.65	-1,058.34	1,442.51	1.42	0.48	3.02
4,441.00	22.31	317.44	4,134.30	1,008.80	-1,083.11	1,479.88	4.59	-4.47	-2.47
4,531.00	18.44	317.19	4,218.65	1,031.83	-1,104.34	1,511.16	4.30	-4.30	-0.28
4,622.00	15.69	319.44	4,305.63	1,051.74	-1,122.13	1,537.78	3.11	-3.02	2.47
4,713.00	13.50	318.19	4,393.69	1,069.01	-1,137.21	1,560.63	2.43	-2.41	-1.37
4,804.00	11.88	317.44	4,482.47	1,083.83	-1,150.63	1,580.58	1.79	-1.78	-0.82
4,894.00	10.88	317.19	4,570.70	1,096.88	-1,162.67	1,598.30	1.11	-1.11	-0.28

Survey Report

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: UINTAH\_BONANZA 1023-6K PAD

BONANZA 1023-6E3AS Wellbore: BONANZA 1023-6E3AS BONANZA 1023-6E3AS Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: **Survey Calculation Method:** 

Database:

Well BONANZA 1023-6E3AS

15' RKB + 5219' GL @ 5234.00ft (Xtreme 12) 15' RKB + 5219' GL @ 5234.00ft (Xtreme 12)

True

Minimum Curvature

edmp

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
4,985.00	9.50	317.94	4,660.26	1,108.76	-1,173.54	1,614.37	1.52	-1.52	0.82
5,076.00	8.38	316,69	4,750.15	1,119.16	-1,183.12	1,628.49	1,25	-1.23	-1,37
5,167.00	6.81	318.19	4,840.35	1,128.00	-1,191.26	1,640.49	1.74	-1.73	1.65
5,258.00	5.75	330.32	4,930.81	1,135.99	-1,197.12	1,650.25	1.86	-1.16	13.33
5,348.00	5.00	335.57	5,020.41	1,143.48	-1,200.97	1,658.23	1.00	-0.83	5.83
5,439.00	4.31	333.07	5,111.11	1,150.13	-1,204.16	1,665.15	0.79	-0.76	-2.75
5,530.00	2.31	345.07	5,201.96	1,154.96	-1,206.18	1,669.95	2.31	-2.20	13.19
5,621.00	0.31	15.69	5,292.93	1,156.97	-1,206.59	1,671.64	2.25	-2.20	33.65
5,712.00	0.19	108.82	5,383.93	1,157.15	-1,206.38	1,671.62	0.41	-0.13	102.34
5,802.00	0.31	129.07	5,473.93	1,156.95	-1,206.05	1,671.24	0.16	0.13	22,50
5,893.00	0.50	158.57	5,564.92	1,156.43	-1,205.71	1,670.64	0.30	0.21	32.42
5,984.00	0.75	168.57	5,655.92	1,155.47	-1,205.45	1,669.78	0.30	0.27	10,99
6,075.00	1.00	170.82	5,746.91	1,154.11	-1,205.20	1,668.66	0.28	0.27	2.47
6,166.00	1.06	182.94	5,837.89	1,152.48	-1,205.12	1,667.47	0.25	0.07	13.32
6,256.00	1.25	182.57	5,927.88	1,150.67	-1,205.21	1,666.27	0.21	0.21	-0.41
6,347.00	1.44	182.19	6,018.85	1,148.54	-1,205.29	1,664.85	0.21	0.21	-0.42
6,438.00	0.25	52.94	6,109.84	1,147.51	-1,205.18	1,664.06	1.77	-1.31	-142.03
6,529.00	0.56	70.32	6,200.84	1,147.78	-1,204.60	1,663.83	0.36	0.34	19.10
6,619.00	1.63	5.94	6,290.82	1,149.20	-1,204.06	1,664.43	1.64	1,19	-71.53
6,710.00	1.94	7.82	6,381 <i>.</i> 78	1,152.02	-1,203.71	1,666.13	0.35	0.34	2.07
6,801.00	2.56	31.19	6,472.71	1,155.28	-1,202.45	1,667.49	1,20	0.68	25.68
6,892.00	2.44	4.44	6,563.63	1,158.95	-1,201.25	1,669.18	1.28	-0.13	-29.40
6,983.00	1.81	7.44	6,654.56	1,162.31	-1,200.91	1,671.27	0.70	-0.69	3.30
7,074.00	0.88	24.19	6,745.54	1,164.37	-1,200.44	1,672.36	1.10	-1.02	18.41
7,164.00	0.50	56.19	6,835.53	1,165.22	-1,199.83	1,672.52	0.59	-0.42	35.56
7,255.00	0.63	137.32	6,926.53	1,165.07	-1,199.16	1,671.93	0.81	0.14	89.15
7,346.00	1.13	159.19	7,017.52	1,163.87	-1,198.50	1,670.62	0.65	0.55	24.03
7,437.00	1.81	166.69	7,108,49	1,161.63	-1,197.85	1,668.60	0.78	0.75	8.24
7,527.00	0.94	142.19	7,198.46	1,159.66	-1,197.07	1,666.67	1.15	-0.97	-27.22
7,618.00	1.50	134.19	7,289.44	1,158.24	-1,195.76	1,664.74	0.64	0.62	-8.79
7,709.00	1.02	183.85	7,380.42	1,156.60	-1,194.96	1,663.03	1.26	-0.53	54.57
7,799.00	0.38	357.57	7,470.42	1,156.10	-1,195.03	1,662.73	1.55	-0.71	193.02
7,890.00	0.81	300.07	7,561.41	1,156.73	-1,195.60	1,663,57	0.75	0.47	-63.19
7,981.00	1.69	309.94	7,652.39	1,157.91	-1,197.18	1,665.53	0.99	0.97	10.85
8,072.00	1.19	310.94	7,743.36	1,159.39	-1,198.93	1,667.82	0.55	-0.55	1.10
8,163.00	0.56	296.94	7,834.35	1,160.21	-1,200.04	1,669.18	0.73	-0.69	-15.38
8,253.00	0.25	225.32	7,924.35	1,160.27	-1,200.57	1,669.61	0.60	-0.34	-79.58
8,344.00	0.44	161.94	8,015.35	1,159.80	-1,200.60	1,669.31	0.44	0.21	-69.65
8,435.00	0.63	141.07	8,106.34	1,159.08	-1,200.18	1,668.50	0.30	0.21	-22.93
8,526.00	1.25	127.44	8,197.33	1,158.09	-1,199.08	1,667.02	0.72	0.68	-14.98
8,616.00	1.50	128.69	8,287.30	1,156.75	-1,197.38	1,664.87	0.28	0.28	1.39
8,707.00 8,798.00	1.81 2.00	130.94 124.44	8,378.27 8,469.22	1,155.07 1,153.23	-1,195.36 -1,192.97	1,662.25 1,659.25	0.35 0.32	0.34 0.21	2.47 -7.14

Survey Report

Company:

US ROCKIES REGION PLANNING

Project: Site:

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_BONANZA 1023-6K PAD

Well: Wellbore: BONANZA 1023-6E3AS

Design:

BONANZA 1023-6E3AS BONANZA 1023-6E3AS Local Co-ordinate Reference:

Well BONANZA 1023-6E3AS

TVD Reference: MD Reference:

15' RKB + 5219' GL @ 5234.00ft (Xtreme 12) 15' RKB + 5219' GL @ 5234.00ft (Xtreme 12)

North Reference:

Minimum Curvature

**Survey Calculation Method:** Database:

edmp

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Measured			Vertical			Vertical	Dogleg	Build	Turn	
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)	
8,935.00	1.08	151.54	8,606.17	1,150.74	-1,190.38	1,655.66	0.84	-0,67	19.78	0.898
<b>LAST MWD </b> \$ 8,985.00	1.08	151.54	8,656.16	1,149.91	-1,189.93	1,654.76	0.00	0.00	0.00	

Design Annotations  Measured  Depth  (ft)	Vertical Depth (ft)	Local Coor +N/-S (ft)	dinates +E/-W (ft)	Comment
2,500.00	2,367.14	468.36	-494.39	TIE ON POINT
8,935.00	8,606.17	1,150.74	-1,190.38	LAST MWD SURVEY

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Checked By:	Approved By:	Data	
[ O.1001100 D.j.	Apploved by.	Date	. 1